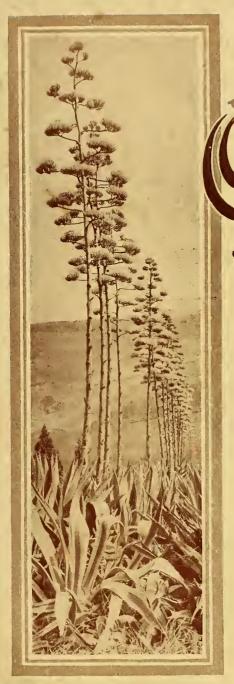
Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.





Ornamental Ornamana Truit (rees

California Nursery Co.Im Niles. California

SEMI-CENTENNIAL EDITION

DESCRIPTIVE CATALOG

ORNAMENTAL and FRUIT TREES



Copyright, 1915

California Nursery Company, Inc. NILES, CALIFORNIA

CONTENTS

											Page
Introduct	tion	-		-		-		-		-	3
Ornamer	tal D	epart	men	t	-		-		-		7
Conifero	us Eve	ergre	ens	-		-		-		-	7
Broad-Le	aved	Ever	gree	ns	-		-		-		17
Deciduou	ıs Orr	ame	ntal	Tre	ees	-		-		-	40
Deciduo	ıs We	eping	g Tr	ees	-		-		-		49
Deciduo	ıs Shr	ubs		-		-		-		-	50
Climbing	Plan	ts	-		-		-		-		61
Bamboo	-	-		-		-		-		-	69
Palms	-		-		-		-		-		71
Agaves,	Draca	enas	, Et	c.		-		-		-	74
Ferns an	d Mo	sses	-		-		-		-		76
Miscellar	eous	Plan	ts	-		-		-		-	77
Roses	-		-		-		-		-		88
Groups:	for va	arious	s pu	rpos	ses	-		-		-	100
Fruit De	partm	ent	-		-		-		-		103
Suggestie	ons fo	r Pla	ntin	g aı	nd	Prur	ing	-		-	120
Insect an	d Fur	igus	Rem	edi	es				-		121

Introduction



T HAS BEEN our custom in the past to publish our descriptive catalogs of Fruit and Ornamental Stock separately as catalogs Number 1 and 2. The present publication, corresponding to the 9th edition of Ornamental Catalog, combines the two and describes everything we are propagating at this date. While this edition is intended to last four or five years, we are continually acquiring and testing new introductions in both departments. These will be briefly described

in annual price list as offered for sale.

PRICES. This book contains only descriptive matter; no sizes or prices. Stock is continually varying in size, prices fluctuate with supply and demand and long experience has shown us that the only satisfactory plan is to issue price list every year entirely separate from descriptions. In this way we offer each season only what we actually have on hand for sale, give detailed and accurate specifications as to sizes, and quantity rates based on amount of each item on hand. On the other hand the descriptions can be made much more complete and comprehensive than when necessarily abridged to meet the limited space available in a combination of the two. Price list is mailed annually to all customers about Dec. 1st. Copy will be sent free on request at any time.

VISITORS INVITED. Descriptions and illustrations assist greatly in making intelligent selections, but seeing the actual plants and "talking things over" are better yet. So whenever possible we strongly advise and invite all customers to visit the nursery. Our office and grounds are on the State Highway less than a mile west of Niles. If coming by train take Southern Pacific to Niles, phone us from station and we will send conveyance; or better, advise us beforehand of time of arrival and number in party and we will meet train.

TERMS AND CONDITIONS. Information about ordering, terms and conditions of sale, extent of guarantee and other similar matters will be found on inside front cover of annual price list.

ORNAMENTAL DEPARTMENT

ARRANGEMENT. After being subdivided into several classes, such as Conifers, Broad Leaved Evergreens, etc., all plants are arranged by botanical names. This applies both to the genera included in each division and the species under each genus. This may seem too technical to some, but tests of other plans have proved quite unsatisfactory. At least two-thirds of the trees and plants grown here have no well known common names; these must be listed botanically anyway. Using an arrangement based on a mixture of common and botanical names as in our last edition resulted in closely related plants of one genus being widely separated and caused much needless repetition of characters in descriptions. It was an honest effort to simplify matters, but results showed that it only complicated them. In every case where a plant has a common name it is given immediately after the botanical name. It is only the arrangement that is based on the latter.

As catalog is thoroughly indexed for all common names and synonyms, as well as botanical names, any desired item can be quickly located.

NOMENCLATURE. Following the precedent of our last edition and in accordance with resolutions adopted by Pacific Coast and California Associations of Nurserymen, we have adopted as a standard for botanical names the Cyclopedia of American Horticulture by L. H. Bailey (1900 edition)—Bamboos and Washingtonia palms excepted. We had hoped that the 1914 edition would be completed so that names could be revised to comply with it, but as this catalog goes to press it has been published only through the letter K, so is, of course, unavailable. Reference can be made to 1900 edition for more detailed and technical descriptions under the primary name given for each plant. Where there is another botanical name in more

or less common use, but not conforming to standard mentioned, we give it in parenthesis immediately after standard botanical name. Descriptions are made from the actual plants here in our nursery and verified by reference to botanical standards.

HEIGHTS. In nearly all cases we give a height following the name and native country of each plant. These must be regarded as approximate as they are based on heights attained in native habitat. In cultivation under very different climatic conditions this often varies considerably, or as in the case of Sequoias, for instance, the attainment of maximum height is a matter of centuries. In spite of obvious exceptions we think the data given will be helpful.

ILLUSTRATIONS. Only reproductions from photographs are used. The too exuberant fancy of artists portraying horticultural subjects has resulted in a well grounded distrust of their exaggerated creations, while photographs show things as they are. All half tones have been reproduced without retouching from original photographs made in our laboratory and taken mainly from plants in our grounds.

SUPPLEMENTAL GROUPINGS. At the end of ornamental department will be found several lists containing trees and plants grouped according to various uses and characteristics, such as Street Trees, California Native Trees and Plants, Bearing Ornamental Berries, Variegated Foliage Plants, etc.

GROWING. To those familiar with the nursery and its methods it is needless to say much on this point. Everything is grown with an eye to its best possible development and ultimate safe transplanting. Many things are grown only in pots as they cannot be transplanted after being planted out in the open ground. Others are grown both ways, giving a very wide range in sizes and prices. Our aim and constant effort is to grow stock of the highest quality and we feel that it is pardonable for us to be proud of the fact that we have been doing this steadily for fifty years and as a result our ornamental department has become by far the largest and most complete in the West.

HOW DUG-IMPORTANT. In making out orders it is important to note that Price List specifies five different conditions of trees and plants. To explain briefly:

Established. This means that the trees or plants have been grown in the open ground, dug into boxes in the early fall and given special treatment until they have made new root growth, thereby becoming "established." This treatment is necessary and practiced only with evergreen trees and plants. Such plants are indicated in price list by giving the dimensions of the box in which they stand. For instance: "16x18 inch box, 6 to 7 ft." means that the plant is already dug and established in a box 16 inches square on top and 18 inches deep, inside measurement, and that the plant stands between six and seven feet tall measured from the top of the box.

Boxed. Indicates that the tree or plant is still in the open ground, but when dug will be boxed as it is too large to be balled.

Balled. Ordinary medium sized evergreens are dug with a proper sized ball of earth around the roots. This ball is tightly wrapped in burlap. In all cases and under all circumstances, plant burlap and all without even cutting the rope. Violation of this rule causes more loss of plants than any other one thing. After it is planted and the dirt packed down the rope attaching the top of burlap to trunk can be cut.

Naked Roots. All deciduous trees and shrubs grown in the open ground are dug with bare roots. Balling is unnecessary and of no benefit. There are a few minor unimportant exceptions and in such cases price list specifies "balled."

From Pots. In most instances pot grown stock is taken from the pots and the ball of earth and roots wrapped in burlap. It is safer to plant burlap and all, but removal is not so likely to be harmful as in the case of balled plants. Plants for house and conservatory culture, like ferns, house palms, etc., are ordinarily shipped in the pots.

Established and pot grown stock can be safely transplanted any time in the year; that in the open ground only during the winter months.

FRUIT DEPARTMENT

GENUINENESS. Important beyond everything else to the commercial planter is the matter of getting fruit trees that are of the variety they purport to be. Only in a few scattered, negligible instances can the variety be determined before they come into bearing. Consequently the planter is absolutely dependent on the nurseryman. The common practice of cutting buds from young trees in the nursery row, buying them from other nurserymen who will do the same, or getting them from orchards is a most prolific source of trouble, even granting the best intentions in the world. Things are different here. We have in our specimen orchards on the nursery bearing trees of every variety we propagate (and hundreds that we do not) and every bud or cion used is taken direct from these bearing trees, cut and distributed by one man. We doubt if there is another nursery in the United States that has carried this point as far and can get all their budding and grafting wood from their own bearing trees.

QUALITY. Our nursery stock is the best that can be grown or money can buy. Fifty years' experience, up-to-date methods, suitable soil, favorable climate, abundance of water—all these and other things contribute toward this result. Recently we have on two occasions exhibited an assortment of our trees at the California State Fair in competition with all and both years we received the first prize.

ROOTS. All our fruit trees are grown on whole seedling roots. The advantage of this in promoting the health and thriftiness of trees over others grafted on pieces or sections of roots, or budded on stocks grown from cuttings, is acknowledged by the best authorities, and is easily apparent to the most casual observer. All Myrobolan seedlings are grown from seed borne in our own orchard. The progeny of each tree has been thoroughly tested and only those are used which produce strong, vigorous stocks.

DIGGING. It is useless to grow good roots if they are all chopped off in digging. On a small scale it is quite possible to get good roots with a spade, but with any great quantity it is not probable. We dig with a digger using as high as twenty-six horses on each machine. This has a U-shaped blade which runs at from 18 to 24 inches under the surface, width in proportion. Only the outer ends of roots are cut off in this way, leaving a root system entirely competent to start and maintain a vigorous growth.



 $\begin{array}{c} \textit{Chrysanthemum frutescens Mrs. F. Sander.} & \textit{Double Marguerite See page } 80 \\ & \textit{(One flower of Common Marguerite included for comparison)} \end{array}$

Ornamental Department

(Please Read Introduction to Catalog)

CONIFEROUS EVERGREENS

HIS division embraces the most beautiful evergreen trees suitable for the Pacific Coast. When planted as specimens, most of them require no pruning, in fact would be injured by it. The lower limbs must be allowed to remain; to remove them is to destroy the beauty of nearly any conifer. If any particular situation makes a bare trunk imperative, it is usually better to plant some other kind of a tree.

A few trees in this section are suitable for large plantations; particularly three native species: Lawson Cypress, Monterey Cypress and Monterey Pine. The two latter are extremely fast growers, excelling almost all other conifers in this respect. Monterey Cypress is the best conifer for hedges, enduring almost any amount of trimming.

All trees in this division when dug are either boxed or balled. In the latter case the burlap must not be removed when planting. Plant burlap and all; it will soon rot. To remove it is to risk the loss of the tree through breaking the ball. Further instructions in back of catalogue.

We were awarded the Medal of Honor by the Panama-Pacific International Exposition for our exhibit of one hundred different species and varieties of Coniferous Evergreens.

ABIES: Fir

The Firs as a class are marked by pronounced regularity and symmetry of growth. Branches are usually produced in tiers, and by side branching form wide, flat sprays. Outline usually elongated conical. Distinguished from Spruces (*Picea*) by the sessile (stemless) leaves, which ultimately fall away clean from the branches, leaving the latter perfectly smooth; and by the cones, which are always borne erect. These fall to pieces at maturity, leaving the slender, woody axis on the tree. About a third of all known species are native to the Pacific Coast Region.

A. baborensis (A. numidica). ALGERIAN FIR. N. W. Africa. 60 ft. A very rare fir. Leaves blunt, set closely together, short, marked with two glaucous lines beneath; upper surface deep green, usually tipped with a single, short, glaucous line. Habit compact.

A. balsamea. BALSAM FIR. E. North America. 80 ft. Growth erect, branches spreading. Foliage aromatic, dark glossy green above, gray on the under side.

A. cephalonica. CEPHALONIAN FIR. Island of Cephalonia. 70 ft. A very beautiful species; broad for its height. Leaves are dark green above, silvery beneath, dagger-shaped and very acute, standing out from branches at right angles. Makes a fine specimen.

A. cilicica. CILICIAN FIR. Asia Minor. 60 ft. Leaves narrow, flattened; dark glossy green above, silvery white beneath. Very hardy.

A. concolor. WHITE FIR. Western North America. 200 ft. Very beautiful fir; conspicuous on account of its ashy gray, often nearly white bark. Growth very regular and symmetrical; sometimes open, often very compact. Leaves long and slender, light green, usually very glaucous. This is the Silver Fir so highly admired in the Yosemite and Sierra region generally. Very resistant to drought and heat.



Araucaria imbricata. Monkey Puzzle See page 9

A. firma. Japan. 100 ft. A stately tree of rapid growth. Branches stout but flexible. Leaves are long, flattened, glossy green above, paler underneath, usually forked at tips. Young growth light, yellowish green, making a pleasing contrast. A very ornamental and desirable Japanese species. Entirely distinct in appearance from all other firs.



Abies nordmanniana. Nordman's Silver Fir

ABIES: Fir-Continued

A. grandis. GRAND FIR. N. W. America. 250 ft. Handsome fir of rather compact growth under cultivation. Leaves thin and flexible, arranged in flat rows on opposite sides of branchlets; apple green above, silvery beneath. Suitable for cool coast regions, but burns in hot sun of interior.

A. lasiocarpa. ALPINE FIR. N. W. America, 90 ft. Very similar to Abies concolor, but usually of more open growth. Has the same conspicuous white bark.

A. nobilis. RED FIR; NOBLE FIR. Washington and Oregon. 200 ft. In its native habitat Red Fir is indeed noble. Under cultivation in dry climates, while very beautiful, it is of slow and very compact growth. Branches densely covered with foliage, deep green above, silvery beneath.

A, nobilis glauca. SILVERY RED FIR. A garden form of preceding with very glaucous foliage. In this climate it is a true dwarf, usually growing only three or four inches a year. Of great value for Japanese gardens.

A. nordmanniana. NORDMAN'S SILVER FIR. Caucasus. 150 ft. A majestic species: growth slow, but eventually becomes a large tree. Branches very widely spreading, so that a particularly good specimen should be as broad as it is tall. Leaves are flattened, not acute, dark green and glossy above, silvery underneath. The contrast in color between the old and new growths is most charming. One of the very best firs.

A. picea (A. pectinata). SILVER FIR Europe. 150 ft. Of moderate growth, ultimately forming a large tree. Leaves are dark, glossy green above and silvery beneath. Somewhat resembles A. nordmaniana, but has shorter leaves, and usually of more open growth.

A. pinsapo. SPANISH FIR. Spain. 80 ft. A magnificent tree, very regular and symmetrical in habit. Leaves, rigid, acute, entirely surrounding the branchlets; often reflexed; upper surface glaucous, underlaid deep green, while the lower surface is marked with two conspicuous silvery lines. Well adapted to a warm climate.

A. pinsapo glauca. Variety of preceding with silvery foliage and of slower, more compact growth.

AGATHIS

A. robusta (Dammara robusta). DAMMAR PINE. Australia. 130 ft. A very rare and decidedly unique tree. Branches spreading. Leaves over an inch wide and three or four inches long, leathery and brownish. Tips of new growth often yellowish, forming fine contrast with older foliage.

ARAUCARIA

A genus of magnificent, tall-growing trees, all natives of the Southern Hemisphere. Most of the species have a very symmetrical habit, some carry this to a most remarkable extent. Cones are very large and solid, but are not borne until the trees attain considerable age.

A. bidwilli. BUNYA-BUNYA. Australia. 150 ft. Beyond question this tree ranks among the very best conifers for California. Grows quickly and makes a large tree. Leaves are flat, sharp and dark, glossy green. Cones about the size and shape of a large pineapple. When young the tree is loose and open, but with growth becomes compact and extremely symmetrical. The lower branches on an old tree will strike the ground about ten feet from the trunk and then rise to a height of about three feet. Should always be planted solitary as a specimen and plenty of room allowed for development.

A. brasiliensis. BRAZILIAN PINE. Brazil. 70 ft. Foliage similar to preceding, but very glaucous and more freely branching. Grows rapidly and is a fine plant when young.

A. excelsa. NORFOLK ISLAND PINE. Norfolk Island. 200 ft. When well established this beautiful tree is perfectly hardy in this part of the State. The growth is absolutely symmetrical; branches growing in tiers, between which the trunk is perfectly bare. Leaves are small, awlshaped and curved. Seedlings are suitable for planting in open ground, but for pot culture plants grown from cuttings, or the following grafted forms, are decidedly preferable.

A. excelsa glauca. Identical with the type except in color of foliage, which has a beautiful bluish or glaucous hue. Fine for pot culture as well as for planting out.

A. excelsa robusta compacta. Variety of more compact growth. Branches are broader and longer, with better foliage than in the type. The color is a deep, rich green. The best of the Araucarias for indoor culture.

A. imbricata. MONKEY PUZZLE. 100 ft, Well-known tree of very unusual appearance. Trunk straight; coarse, blunt branches in regular whorls. Leaves short, broad, triangular; very sharp, overlapping like shingles, closely surrounding trunk and branches. Entirely unlike any other tree.

CEDRUS: Cedar

Although many conifers of various kinds have the name "Cedar" applied to them, the true Cedars are limited to three species, all natives of the Old World. There are no true Cedars native to North or South America.

They are all magnificent, long-lived trees of noble appearance and readily distinguished by their needle-like leaves produced in bunches except on the young growing shoots, where they are scattered. Cones are borne erect and are very beautiful.

C. atlantica. MT. ATLAS CEDAR. North Africa. 120 ft. Large, pyramidal, open tree. Leaves very slightly glaucous. The hardiest species.

C. atlantica aurea. GOLDEN MT. ATLAS CEDAR. Variety differing from type in the strong golden hue of foliage.

C. atlantica glauca. BLUE MT. ATLAS CEDAR. 100 ft. A variety of C. atlantica with intensely glaucous or silvery leaves. When young, the growth is irregular and straggling, but later becomes symmetrical and compact. One of the most strikingly beautiful specimen trees in our collection

C. deodara. DEODAR; INDIAN CEDAR. Himalaya Mts. 120 ft. This magnificent tree is a picture of grace and beauty. Pyramidal in general outline; the lower limbs lie on the ground, all the upper ones droop gracefully. The foliage of young trees is decidedly glaucous, but not so much so when older. Thrives to perfection in California.

C. deodara verticillata glauca. 75 ft. A variety with light bluish leaves and stiffer growth. Retains its glaucous hue even when older.

C. libani. CEDAR OF LEBANON. Asia Minor. 100 ft. Vigorous growth; wide-spreading, horizontal branches; dark green foliage; massive and picturesque. Closely resembles C. atlantica, but grows slower and more compact.

CEPHALOTAXUS

C. pedunculata fastigiata. JAPANESE YEW. 8 ft. Entirely distinct from other Yews. Growth very compact, upright and columnar like Irish Yew. Leaves larger, nearly two inches long, acute, deep glossy green above and marked with two broad, silvery lines beneath. Very fine. (Note—The common name, "Japanese Yew," is also applied to Taxus japonica, which is entirely distinct.)

CHAMAECYPARIS

A genus closely related to *Cupressus* (*Cy*-press). As a class they may be called "Flatbranched Cypresses," as the branchlets are always-arranged so as to lie in a plane. Cones are smaller than those of Cypress. Habit varies from almost dwarfs to very large trees. (See subheading *Retinispora* below.)

C. lawsoniana. LAWSON CYPRESS; PORT ORFORD CEDAR. Oregon and California. 200 ft. A beautiful tree, native of this State; tall and slender except at base. Has elegant drooping branches and very slender, feathery branchlets. Foliage usually more or less glaucous. Tip of tree always droops.

C. lawsoniana alumi. 100 ft. A variety of Lawson Cypress, of dense growth and columnar habit. Foliage very glaucous, with decidedly bluish metallic hue.

C. lawsoniana erecta viridis. A remarkably handsome variety, differing in its color and compact growth. The branchlets all stand vertically and close together. The foliage is a clear, rich green with no glaucous markings. Develops very symmetrically into a beautiful specimen for individual planting.



Araucaria excelsa glauca



Araucaria excelsa. Norfolk Island Pine See page 8

CHAMAECYPARIS—Continued

C. lawsoniana filifera glauca. Entirely unlike the type, from which it varies similarly to and as widely as does Thuya orientalis pendula from its natural form. It produces an abundance of long, slender, thread-like branchlets covered with minute, closely overlapping leaves. Only moderately glaucous. Growth quite erect; tips of branches somewhat drooping. Very graceful and handsome.

C. lawsoniana glauca coerulea. Beautiful compact form with silvery foliage.

C. lawsoniana lutea. GOLDEN LAWSON CY-PRESS. Variety with intensely yellow foliage. One of the brightest trees of this color. Being subject to sunburn in hot locations, it should be given a shaded situation.

C. nutkaensis glauca. NOOTKA SOUND CY-PRESS. N. W. America. A vigorous, upright-growing tree, with spreading, upward-curved branches and flexible branchlets. Foliage dark green with silvery glaucous tint. Somewhat resembles Lawson Cypress.

C. obtusa pendula. WEEPING JAPANESE CYPRESS. Medium-sized tree of slow growth. Branches scattered, slender, thread-like and drooping. Foliage light green. General appearance very loose and open.

RETINISPORA

Shrubs or very small trees of varying appearance. Originally supposed to be a distinct class, but later found to have been developed by the Japanese by propagating from juvenile forms of Chamaecyparis.

C. pisifera plumosa aurea. Low, compact tree of slow growth and regular outline. Foliage plumy, very graceful; tinged in spring with a golden hue.

C. pisifera plumosa viridis. Similar to preceding, but foliage is deep, attractive green.

C. obtusa decussata. Shrub of very dense growth, after the style of Cryptomeria japonica elegans. Form nearly globular. Leaves needle-like, very silvery and assume bronzy winter tints.

C. sphaeroidea ericoides. Similar to preceding, but with slightly narrower and longer leaves and of more compact growth. Summer color less glaucous; winter tints more pronounced.

CRYPTOMERIA

C. japonica. JAPANESE CEDAR. 125 ft. In Japan this is a magnificent tree of noble proportions. In California it does not succeed well except in the cooler, moister parts, as it suffers from hot summer weather. Growth is rapid; branches rather distant, giving it a loose, open appearance. The only species of the genus.

C. japonica elegans. 20 ft. Botanically a variety of the foregoing, but so very distinct that the relationship is difficult to recognize. Foliage fine and feathery, but very dense and compact; in summer a rich green, but changes to purplish bronze in winter. A very handsome small tree.

CUNNINGHAMIA

C. sinensis. China. 80 ft. A tree resembling the Araucarias, but distinct. Has curving, flattened leaves in two rows along the wide-spreading, whorled branches. Requires a cool, shaded location. Very rare.



Cedrus deodara. See page 9 DEODAR

CUPRESSUS: Cypress

A genus of tall or medium-sized trees, natives of the warmer portions of the North Temperate Zone. Growth mainly erect. Foliage consists of very small, overlapping, scale-like leaves. Cones nearly globular.

- C. arizonica. ARIZONA CYPRESS. 50 ft. Handsome tree with brilliant, silvery blue foliage. Growth rather compact with somewhat stout branches. Bark red. Similar to Guadalupe Cypress in color, but more compact and with straighter, more ascending branches.
- C. benthami knightiana. KNIGHT'S CYPRESS. Mexico. 70 ft. A tall tree of elegant habit, with drooping, feathery and fern-like branchlets, and well distinguished by the glaucous, bluish hue of its foliage.
- C. guadalupensis glauca. BLUE GUADALUPE CYPRESS. 60 ft. In its form, very rapid growth and other respects, except color, this splendid tree is quite similar to Monterey Cypress; but the foliage is an intense silvery blue. Seedlings vary decidedly, but our stock is always grafted to insure maintenance of the rich color.
- C. macrocarpa. MONTEREY CYPRESS. California. 70 ft. The well-known, rapid-growing native Cypress. Useful where quick effect is wanted, and makes a dense, compact hedge.
- C. macrocarpa lutea. GOLDEN MONTEREY CY-PRESS. A very beautiful golden-hued variety of the Monterey. Color especially pronounced in spring and held fairly well through the year.
- C. macrocarpa variegata. VARIEGATED MONTEREY CYPRESS. The variegation is very plentiful all over the tree. The creamy yellow markings mixed with the green make this a very striking specimen.
- C. sempervirens fastigiata. ITALIAN CYPRESS. Europe and Asia. 75 ft. A tall, very slender, tapering tree with strict branches lying close to the stem; much esteemed for lining drives and landscape work.

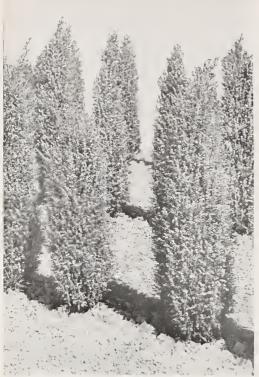
JUNIPERUS: Juniper

Mainly small trees of rather slow growth. They have two kinds of foliage. One is needle-like, prickly, in whorls of three; the other scale-like, overlapping and arranged in four rows like those of Cypress, which they often closely resemble. Most species show both kinds of leaves on the same tree; others are limited to but one form. Fruit is a berry, not at all cone-like.

- **J. bermudiana.** BERMUDA JUNIPER. 40 ft. A rapid-growing species with spreading branches. Foliage pale bluish green. Bears annually a good crop of bright bluish berries.
- J. chinensis. JAPANESE JUNIPER. Asia. 60 ft. Handsome tree, thickly branched, of dense growth, with glaucous green foliage.
- J. chinensis argenteo-variegata. VARIEGATED JAPANESE JUNIPER. Similar in form and habit to the Japanese, but is slightly variegated with creamy white.
- J. chinensis pendula. WEEPING JAPANESE JUNIPER. A very handsome form. Growth erect, but the spreading branches all droop at the tips, giving the tree a decidedly graceful appearance.
- J. chinensis procumbens. CREEPING JAP-ANESE JUNIPER. A dense, dwarf shrub with trailing branches and glaucous foliage. A fine variety.
- J. chinensis procumbens aureo-variegata. GOLD-EN CREEPING JAPANESE JUNIPER. A form of above; foliage variegated with golden yellow.
- J. communis hibernica. IRISH JUNIPER. A distinct and beautiful variety of slender, erect, dense, columnar growth. Foliage very glaucous. Very useful where a tree is needed shaped like Italian Cypress, but of slower and smaller growth.



Cupressus sempervirens fastigiata
Italian Cypress



Juniperus communis hibernica IRISH JUNIPER See page 11

JUNIPERUS: Juniper-Continued

J. Oxycedrus. PRICKLY JUNIPER. Mediterranean region. 12 ft. Bushy shrub or small tree with very slender branches. Leaves all needle-like, long, slightly flattened and marked with two glaucous lines above. The whole plant has a very silvery hue and graceful habit.

J. phoenicea. PHOENICEAN JUNIPER. Mediterranean region. 20 ft. Small tree with upright branches. Leaves usually needle-like and overlapping; bluish green, often very silvery.

J. sabina. SAVIN JUNIPER. A dwarf ing shrub, with partially trailing branches. A dwarf spread-branches. Thrives in the poorest soil.

J. virginiana glauca. BLUE VIRGINIA CEDAR. A very glaucous form of the so-called Eastern "Red Cedar." The silvery color is quite pronounced and its habit graceful and pleasing. Very handsome tree.

J. virginiana pfitzeriana. PFITZER'S JUNIPER. A new and very graceful variety. Develops a large number of long, slender, tapering shoots clothed with fine sage green foliage. Most of the leaves are minute and scale-like, but with here and there a few very silvery ones of the needle form. In all one of the most highly desirable Junipers.

LIBOCEDRUS

Large trees with foliage much like Thuya (Arbor Vitae). The native species is one of our handsomest conifers.

L. chilensis. CHILEAN CEDAR. 60 ft. T of spreading but compact growth. Foliage glacous green, marked with silvery lines beneath. very graceful, attractive tree. glau-

very graceful, attractive tree.

L. decurrens. INCENSE CEDAR. WHITE CEDAR. California and Oregon. 100 ft. A noble tree of vigorous, close growth and conical outline. Branches are spreading and ascending, clothed with compact, bright, glossy green foliage. Easily among the best of our specimen trees.

PICEA: Spruce

Symmetrical trees of straight, upright growth, with branches produced in whorls. Often confused with the Firs, from which they can very easily be distinguished by their leaves, which are borne on a very short leaf stalk instead of directly on the branch, as is the case with Firs. When the leaves finally drop the little stalks remain on the limbs, giving them a bristly appearance. Cones are always pendant instead of erect and do not fall to pieces. Of great importance both ec -nomically and horticulturally.

- P. ajanensis. ALCOCK'S SPRUCE. Asia. 150 ft. Growth erect. Branches stout and rigid. Leaves usually acute, sometimes blunt; pale green on one side with two faintly glaucous, shallow furrows; other side is glaucous with narrow, green ridge down the middle.
- P. alba coerulea. 100 ft. A silvery blue form of the White Spruce. Growth and general appearance like Norway Spruce, but entirely different in color, and bears very small cones. Not as silvery as Colorado Blue Spruce, but of much quicker growth.
- P. bicolor. TWO-COLORED SPRUCE. Japan. Very striking tree. Leaves green above, very silvery beneath. Viewed from any direction, some branchlets show the green hue, others the silvery, making an unusual contrast. Subject to sunburn in hot localities. Growth slow here.
- P. engelmanni. ENGELMANN SPRUCE. Pacific Coast. 150 ft. Tree of regular pyramidal shape, with slender, spreading branches. Leaves acute, bluish green and very aromatic. Often confused with P. pungens, to which it is indeed very similar.
- P. excelsa, NORWAY SPRUCE. Europe, 150 ft. A compact, symmetrical tree; the branches assuming a graceful, drooping habit with age. Cones very large. Foliage light green in this climate. Extremely hardy and of rapid growth. The original Christmas tree of northern Europe.
- P. excelsa pendula. WEEPING NORWAY SPRUCE. A variety with decidedly drooping branches. Growth is very irregular and picturesque.
- P. maximowiczi. Similar in a general way to Picea polita, but smaller in all its parts and with duller green leaves.
- P. orientalis. ORIENTAL SPRUCE. Asia. 100 ft. The most delicate and graceful of all the spruces. About the same color as Norway Spruce, but with more slender branches, shorter leaves, and far more compact. Grows very slowly and is the very best spruce for small grounds.
- P. polita. TIGER TAIL SPRUCE. Japan. 90 ft. A distinct Japanese species. It is of erect habit, and has sharply pointed, very rigid, bright green leaves, contrasting beautifully with the yellow branches. Excellent specimen tree for a lawn.
- P. pungens. COLORADO SPRUCE. Western United States. 100 ft. Regular, compact, pyramidal tree, with stout, horizontal, bright yellowish brown branches. Leaves rigid, very acute, varying from green to silvery white. Specimens having the silvery hue well developed are considered to belong to the following variety.
- P. pungens glauca. COLORADO BLUE SPRUCE. A form of preceding with intensely glaucous, silvery foliage. As a lawn tree it is unsurpassed for distinctiveness and beauty.
- P. pungens kosteriana. KOSTER'S BLUE SPRUCE. Another glaucous variety of P. pungens with shorter leaves and more compact growth. Foliage extremely silvery.
- P. pungens kosteriana pendula. KOSTER'S WEEPING BLUE SPRUCE. A variety of preceding, differing in its weeping branches, some of which grow directly downward. The silvery hue is fully retained. Entirely unique.
- P. sitchensis. MENZIES SPRUCE. SITKA SPRUCE. North Pacific Coast. 100 ft. In form and habit similar to the White Spruce. Foliage very dense, of rich blue or sage color. From a distance some branches appear greenish, others silvery, forming very beautiful contrasts.



Picea pungens glauca Colorado Blue Spruce See page 12

P. smithiana (P. morinda). Himalaya Mountains. 150 ft. Handsome species of very distinct habit. The main trunk grows upright; the branches slope downward, the branchlets droop very decidedly. The leaves are closely set, very long, slender and very soft, not at all rigid. Possesses decided individuality and great beauty.

PINUS: Pine

Well-known genus of varying habit, growth and appearance, but all characterized by needlelike leaves in bundles of from two to five. Many are excellent specimen trees, others especially useful where a considerable area is to be covered.

- P. canariensis. CANARY ISLAND PINE. 80 ft. Easily one of the most beautiful pines. The extremely long leaves, eight to twelve inches in length, are gathered into large tufts all over the tree, giving it decided individuality. New growth on small branches is silvery white in young trees. Vigorous and thrives perfectly under our conditions.
- P. coulteri. COULTER PINE. BIG CONE PINE. California. 80 ft. Leaves dark bluish green, very long, rigid and clustered at the ends of the branchlets. Growth rapid. A handsome and distinct species. Cones extremely large, sometimes over a foot long.
- P. halepensis. ALEPPO PINE. Western Asia. 60 ft. Growth very rapid; habit spreading. Leaves medium length, light yellowish green. Succeeds admirably in California.
- P. jeffreyi. JEFFREY PINE. Oregon and Callfornia. 150 ft. Forms large tree with short, spreading and sometimes drooping branches. Leaves long, sharp, light bluish green. Cone large.
- P. laricio austriaca. AUSTRIAN PINE. Southern Europe. 100 ft. A robust, hardy, spreading tree with stout, blunt branches and stiff, very dark green leaves.

- P. montana. SWISS MOUNTAIN PINE. Europe. 40 ft. A low, densely branched, small tree or shrub. Leaves short, bright green.
- P. parryana. PARRY PINE. California. 40 ft. Medium-sized tree of moderate growth, with regular, conical outline. Leaves at first apparently one, but later separate into four or five; clear green on the outside, intensely glaucous on the inner surface. Cones small; seeds edible. A decidedly ornamental variety and about the best of the smaller sorts.
- P. pinaster (P. maritima). CLUSTER PINE. South Europe. 100 ft. A beautiful tree of pyramidal habit. Bark coarse and deeply furrowed. Leaves twisted, very long, bright green.
- P. pinea. ITALIAN STONE PINE. Southern Europe. 80 ft. Of slow growth, delighting in a deep, sandy, dry soil. Very symmetrical and compact. With age it forms a flat, parasol-like head. Foliage deep green, presenting a striking contrast to that of the young growth, which is silvery blue.
- P. ponderosa. WESTERN YELLOW PINE. Western United States. 200 ft. A tree with stout, spreading branches, forming a narrow, spire-like head. Leaves long, acute, dark green. One of the most important pines of the Western States.
- P. radiata (P. insignis). MONTEREY PINE. Central California. 100 ft. Our well-known native variety. The most handsome of the genus. Growth upright and extremely rapid, probably more so than any other pine.



Picea sitchensis. MENZIES SPRUCE See page 12

- P. sabiniana. DIGGER PINE. GRAY PINE. California. 80 ft. Leaves glaucous, bluish green, pendulous and slightly twisted. Cones very large; seeds edible. Branches horizontal. Growth rapid.
- P. torreyana. SOLEDAD PINE. TORREY PINE. California. 50 ft. Probably the rarest known pine; found wild only on a small strip of ground a few miles from San Diego. Rather small tree; branches usually spreading; leaves very long, stiff, dark green, five in each sheath. Valued for its individuality of habit and great rarity.

PODOCARPUS

A genus rare in cultivation, but naturally well distributed in the warmer regions. Trees or shrubs, distinguished by more or less broad, often elongated, leathery leaves. Fruit is a plum-like berry borne on a stalk.

- P. macrophylla. Japan. 50 ft. Very unique and ornamental conifer of bushy, spreading growth. Leaves shaped like those of oleander, but slightly smaller and yellowish green. Bark of all except the older branches is green. Rare and very desirable.
- P. nageia. Japan, 90 ft. Quite distinct from preceding. Leaves about half as long, much broader, set close to branches. Usually somewhat glaucous. Decidedly unique.

PSEUDOTSUGA: False Hemlock

A small genus containing only the two species described below.

- P. douglasi. DOUGLAS SPRUCE; OREGON PINE. Pacific Coast. 200 ft. Excepting the Sequoias, our most gigantic native tree. Growth erect and very rapid. Very symmetrical. Foliage very soft and rich, dark green. Yields the valuable timber known as Oregon Pine.
- P. douglasi glauca. BLUE DOUGLAS SPRUCE. Variety of preceding with silvery foliage, and of slower and much more compact growth.
- P. macrocarpa. BIG CONE SPRUCE. Southern California. 60 ft. Similar to P. douglasi, but with drooping branches, pointed leaves and of slower growth. Cones about twice as large.

RETINISPORA: See Chamaecyparis



Large Pines Showing method of balling



Sequoia gigantea. California Big Tree
Trachycarpus excelsus
Japanese Fan Palm
See page 73

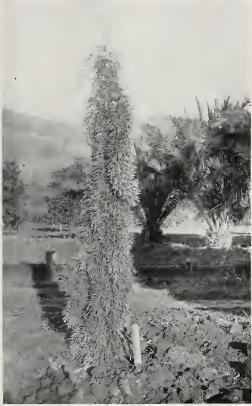
SEQUOIA

Our wonderful native genus of only two species, found nowhere else in the world. Remarkable for their vast size, longevity and resistance to fire. With us both species thrive admirably.

- S. gigantea. CALIFORNIA BIG TREE. 300 ft. Has a straight, erect trunk, with thickly furnished branches, which at first are ascending, but in time curve downwards. The leaves are spirally arranged around the branchlets and are glaucous, light green. Very handsome for a large lawn. When given plenty of room, the branches are retained from the ground up and form a very regular, beautiful, conical outline. The popular opinion that this is a tree of slow growth is decidedly erroneous.
- **S.** gigantea glauca. DWARF BIG TREE. A variety of above, of very much slower growth and bluish green foliage. Very slender.
- S. gigantea pendula. WEEPING BIG TREE. An extremely peculiar form of the Big Tree, showing how widely plants will sometimes vary from type. The foliage is identical, but the limbs grow directly downward and are pressed close to the trunk, giving a narrow, erect form similar to that of Italian Cypress, but less formal.
- S. sempervirens. REDWOOD. California. 300 ft. Almost too well known to need description. Differs decidedly in appearance from Big Tree, the foliage being broader, growth narrower and less compact. Should be planted far more extensively than at present, as it succeeds well in most parts of the State and is a magnificent avenue tree.
- S. sempervirens glauca. BLUE REDWOOD. A variety having foliage with a decidedly bluish cast, but otherwise identical with the preceding.

TAXODIUM

T. mucronatum. MONTEZUMA CYPRESS. Mexico. 150 ft. General appearance very similar to the better known "Bald Cypress" (T. distichum) of the Gulf region—which is described under Deciduous Trees—but carries its foliage all winter. Very delicate and graceful, with fine, soft green foliage. Very beautiful and thrives well in California.



Sequoia gigantea pendula Weeping Big Tree See page 14

TAXUS: Yew

Small trees or shrubs with straight, flat leaves. Growth is slow, wood very hard and strong. The foliage is poisonous to horses and cattle, while the red berries are perfectly harmless and liked by some people.

T. baccata. ENGLISH YEW. Europe and North Africa. 60 ft. Tree or large shrub of slow growth and very bushy head, densely branched and thickly covered with somber green leaves. Can be trimmed into any shape.

T. baccata cheshuntensis. CHESHUNT YEW. Said to have originated as a seedling from the Irish Yew. Leaves are very much larger than those on English Yew and are as dark as the Irish. Growth is strong and extremely irregular, giving it a weird sort of picturesqueness.

T. baccata dovastoni pendula. DOVASTON'S WEEPING YEW. A remarkable weeping variety. All the branches are strongly drooping and clothed with a very dark foliage. Entirely distinct from all other yews and of very striking appearance.

T. baccata dovastoni pendula variegata. DOVASTON'S VARIEGATED WEEPING YEW. A form of the preceding with every leaf marked with creamy bands. In spring the entire plant is brilliant golden.

T. baccata elegantissima. ELEGANT VARIE-GATED YEW. Brilliantly variegated. In spring it is covered with almost solid, golden yellow. This becomes less pronounced later, but every leaf always shows the creamy variegation. Growth is slow, compact and erect. Very fine.

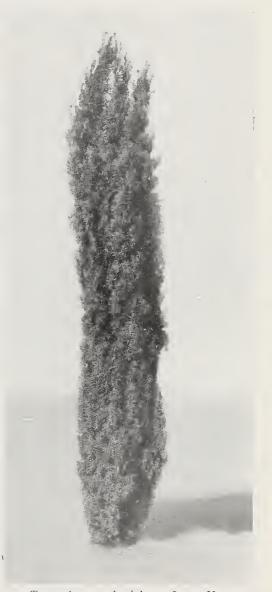
T. baccata erecta. ERECT YEW. Variety of compact, erect growth, similar to that of Irish

Yew. Differs in its more rapid growth, smaller leaves and slightly lighter color. Does not bear berries.

T. baccata erecta aurea. GOLDEN ERECT YEW. Identical with preceding in every respect except the brilliant golden-hued foliage. Its form and color make it a most striking and effective specimen plant.

T. baccata fastigiata. IRISH YEW. Peculiarly upright in growth, resembling a bundle of closely packed branches. The foliage is of the darkest hue, and the whole plant appears like a deep green column. Bears conspicuous red berries.

T. baccata fastiglata variegata. VARIEGATED IRISH YEW. Has the same remarkable form and habit as the Irish Yew, but in the spring the foliage has the most intense golden hue that can be imagined. This becomes creamy as the season advances, but is always very pronounced. Very rare and easily one of the most remarkable conifers in our collection.



Taxus baccata fastigiata. Irish Yew

TAXUS: Yew-Continued

T. baccata washingtoni. WASHINGTON GOLD-EN YEW. A form of the English Yew and of sim-ilar growth, but with golden variegated leaves. Habit bushy. Very distinct and handsome.

T. cuspidata. JAPANESE YEW. Japan, 50 ft. Although a distinct species, it is quite similar to English Yew. Probably grows a little faster; leaves broader and sharp pointed. Bark reddish. (Note—The common name, "Japanese Yew," is also applied to Cephalotaxus pedunculata fastiglata, which is entirely distinct.)

THUYA: Arbor Vitæ

Comprises species of varying growth and appearance, but most are inclined to be compact and of symmetrical shape. Branchlets are usually flattened, with leaves overlapping like scales. Cones very small.

T. gigantea (T. lobbi; T. plicata). GIANT ARBOR VITAE. Pacific Coast. 200 ft. One of our splendid native conifers. In fairly young trees the lower branches are very long in proportion to height and upper half of tree is extremely slender. With age it becomes more columnar, as the lower branches do not maintain their growth. Attains height quite rapidly.

T. gigantea aurea. GOLDEN GIANT ARBOR VITAE. 75 ft. Identical with preceding except foliage strongly marked with yellow.

T. occidentalis lutea. PEABODY'S GOLDEN ARBOR VITAE. 15 ft. A compact form of the American Arbor Vitae, with bright golden foliage. Holds color well.

T. occidentalis wareana. SIBERIAN ARBOR VI-TAE. A very distinct form of nearly globular shape when young. Foliage an unusual shade of sage green. Very compact, regular and handsome.

T. orientalis, CHINESE ARBOR VITAE. Asia.
25 ft. Compact, bushy, small tree. Branchlets stand edgewise to the trunk. Foliage bright, pleasing green; bronzy during winter.

T. orientalis argentea. SILVER VARIEGATED CHINESE ARBOR VITAE. Well described by its name. Growth slow, erect and compact.

T. orientalis aurea. GOLDEN CHINESE ARBOR VITAE. One of the most desirable types. Almost

globular in outline and very compact. During spring the foliage is golden tinted, but as the season advances it changes to a most beautiful, deep, rich Growth slow, but makes a large shrub.

T. orientalis aureo-variegata. GOLDEN VARIE-GATED CHINESE ARBOR VITAE. Growth erect, slender and compact. Foliage freely marked with yellow variegation.

T. orientalis filiformis stricta. JAPANESE ARBOR VITAE. 10 ft. So distinct from other forms of Chinese Arbor Vitae that it might be taken for another species. Without any training it assumes a dense globular form. Foliage light green and thread-like. Entirely unique.

T. orientalis pendula. JAPANESE WEEPING ARBOR VITAE. 10 ft. A form of foregoing with slender, drooping shoots, less regular in outline and

T. orientalis semperaurescens. EVERGOLDEN CHINESE ARBOR VITAE. 10 ft. A compact variety of globular form and dwarf habit, retaining its very pronounced golden tint throughout the year.

THUYOPSIS

T. dolobrata. HATCHET-LEAVED ARBOR VITAE. Japan. 50 ft. Very distinct from other confirers. Foliage dark green above, marked with broad, glaucous lines beneath; curved, scale-like and closely appressed to the branchlets, which are flattened and arranged in fan shape.

T. dolobrata variegata. VARIEGATED HATCH-ET-LEAVED ARBOR VITAE. A form of preceding having tips of branchlets creamy white.

T. californica. CALIFORNIA NUTMEG; TUM-ION. 75 ft. A rare native tree with spreading branches usually in whorls. Leaves long, straight, flattened and very acute. Named from the peculiar form and appearance of the fruit.

TSUGA: Hemlock

T. mertensiana. MOUNTAIN HEMLOCK. N.W. America. 200 ft. A very beautiful native tree. Branches arranged at regular intervals along the trunk. Foliage borne as if in enormous plumes; usually somewhat glaucous. Very symmetrical and handsome. Requires a rather cool and preferably shaded location. Very rare in cultivation.



Abies pinsapo. Spanish Fir. Showing method of boxing. See page 8

BROAD-LEAVED EVERGREENS

In this section we group what are ordinarily called "Broad-Leaved Evergreens" to distinguish them from the conifers. They vary in size from the largest trees to the smallest shrubs, but all included here are supposed to be hard-wooded plants. We have distinguished trees and shrubs by the letters (T) and (S), respectively, placed after names. Many things that are evergreen but not entirely woody will be found under Miscellaneous Plants.

As this division includes such a diversity of trees and shrubs, no definite points on culture can be given. General instructions will be found in back of catalogue. Balled plants and also those from pots are shipped with the earth wrapped in burlap. *Do not remove it.* Plant burlap and all; otherwise the ball might break, causing the loss of the plant. This is a rule that has no exceptions.

ABELIA

A. grandiflora. (S) 6 ft. A garden hybrid. Free-flowering shrub with small, opposite, glossy green leaves. Flowers are tubular, almost an inch long, white flushed lilac pink. The large, ruddy sepals remain after the flowers fall, adding to the showy effect. Blooms profusely and continuously all summer. A very fine shrub.

ACACIA

Flowering trees or shrubs of widely varying habit, appearance and foliage. Flowers are always some shade of yellow, ranging from deepest golden or orange to nearly white. Leaves are either bipinnate (feathery) or reduced to phyllodia (blade-like); in the latter case they vary from minute to very large, in some species attaining to as much as a foot in length. All the following species are native to Australia except where otherwise stated.

A. armata. KANGAROO THORN. (S) 6-10 ft. Spreading shrub with long, slender branches. Foliage deep green, leaves (phyllodia) small and undivided. A small, sharp thorn at each leaf. Flower heads light yellow, borne all along the branches. Makes a very graceful plant.

A. baileyana. (T) 30 ft. One of the very best. Growth extremely rapid when planted out. The whole tree is intensely glaucous throughout the year. Leaves feathery and finely divided. Flowers borne in racemes, are produced very early in the utmost profusion, deep golden yellow. A magnificent species.

A. cavenia. CAVAN. Chile. (T) 15-20 ft. A little known but very handsome species. The leaves are feathery and exceedingly minute. Tree is thorny. Flower heads are unusually large, orange yellow and most intensely fragrant, easily surpassing any other kind we have. Grows slowly and makes only a small tree.

A. cultriformis. (S) 10 ft. Tall shrub with long, willowy, yellow branches. Leaves small, undivided, acute and very glaucous. A very heavy bloomer, with flower heads in clusters and all along the branches; deep golden yellow. Blooms early.

A. cyanophylla. BLUE-LEAVED WATTLE. (T) 20 ft. Makes a small tree or tall shrub. Branches inclined to droop. Leaves are undivided, enormous on young plants, often a foot long, and with a very pronounced blue tint. Flower heads deep golden yellow and unusually large.



Acacia baileyana

A. cyclops. (S) 8-10 ft. A freely branching, spreading shrub. Leaves undivided, rather narrow and of medium length. Flowers yellow in globular heads, often in pairs or clustered.

heads, often in pairs or clustered.

A. dealbata (A. mollissima). SILVER WATTLE. (T) 50 ft. Probably the most popular Acacia in California. Highly prized for its wonderful freedom of bloom in late winter or early spring. Foliage is feathery and varies from silvery to green. Flowers are clear yellow, very fragrant and borne in clustered racemes in utmost profusion, practically covering the tree. When young its growth is almost unbelievably rapid, forming quite a good-sized tree in two or three years. In California this is also commonly known as A. mollissima. In 1900 edition of Bailey it is described as A. dealbata, as above, and in the 1914 edition as A. decurrens dealbata; but it, like the rose, "by any other name would smell as sweet".



Acacia cultriformis See page 17

ACACIA—Continued

ACACIA—continued

A. decurrens. BLACK WATTLE. (T) 60 ft. A fine tree of large size and rapid growth, with broad, round head. Leaves feathery, rich deep green. Flowers are pale yellow or creamy and quite fragrant. Has the unusual habit of blooming twice a year; the first crop doesn't come until long after A. dealbata is out of bloom. Described in 1900 edition of Bailey as A. mollissima and in 1914 edition as A. decurrens mollis. To avoid needless confusion we retain, for the present anyway, the name by which it is generally known.

A. juniperina. (S) 8-12 ft. A shrubby species with numerous needle-like leaves, much resembling those of the better known A. verticillata, but smaller. It also differs in its pale yellow flowers, which are borne in solitary stalked heads instead of in spikes.

A. longifolia (A. latifolia). SYDNEY GOLDEN WATTLE. (S or T) 15-20 ft. Large shrub of quick growth. Can be trained as a small tree and is excellent for hedges. Leaves undivided, long and varying from narrow to broad. Flowers rich yellow, borne freely in rather long spikes.

A. lophantha. See Albizzia lophantha.

A. melanoxylon. BLACK ACACIA; BLACK-WOOD. (T) 80 ft. An erect, pyramidal grower, forming a well-shaped head. Flowers very light yellow, in heads. Leaves large and oblong. Well adapted and extensively used for sidewalk planting owing to its regular, symmetrical growth. A peculiarity of this tree is that when young it has both "blade" and "feather" leaves.

A. neriifolia (A. floribunda). (T) 30 ft. Tall, quick-growing tree with long, slender, light green leaves. Flower heads yellow, in short racemes, very fragrant. Tree is in bloom most of the time; particularly valuable for this reason.

A. podalyriaefolia. (T or S.) A most beautiful Acacia, as yet very rare. It is the first of all to bloom, preceding even A. baileyana. The bladelike leaves are about the shape of A. cultriformis, but larger and covered with silvery down. The branches are also the same tint, giving the entire plant a striking appearance at any season. Flower

heads are rich yellow, rather large and borne in long racemes. Unquestionably a beauty and de-serving great popularity in spite of its curious name.

A. pravissima. (S or T) 20 ft. An elegant species of upright growth, but with very long, slender, drooping branches. Leaves similar to A. cultriformis, but smaller and sage green. Flowers soft yellow, borne early in drooping racemes all along the branches. Rare and very beautiful.

A. pycnantha. GOLDEN WATTLE. (T) 25 ft. Small, round-headed tree with rather stout and often drooping branches. Leaves are undivided and extremely large on young trees, but of ordinary size as tree attains age. The large, golden yellow flower heads, which are quite fragrant, are very freely produced in long racemes.

A. saligna. (T) 20 ft. Very similar to A. cyan-ophylla in all respects except that the foliage lacks the blue tint.

A. verticillata. (S or T) 10-15 ft. Shrub or small tree of very distinct appearance. Leaves awlshaped, dark green, whorled, rigid and sharp, about one-half to three-quarters of an inch long. Flowers light yellow, in short, dense spikes, about an inch long, somewhat resembling catkins of "Pussy Willow". Willow

AGONIS

A. flexuosa. Australia. (T or S) 30 ft. A very rare and very beautiful Australian tree. Its habit is much like that of the Weeping Willow and the similarity is heightened by its very slender, narrow leaves, which on the new growth are very ruddy. Foliage and bark extremely aromatic. Flowers white, small and borne in sessile heads. Branches long, very slender, flexible and wavy. Can be grown either as a tree or shrub.

ALBIZZIA

A. lophantha (Acacia lophantha). Australia. (T) 20 ft. Usually called an Acacia, which it is except for botanical differences. Growth is rapid and very spreading, but regular. Leaves large, deep green, divided into numerous leaflets. Flowers greenish yellow, in short spikes.



Acacia decurrens. BLACK WATTLE



Acacia longifolia (A. latifolia) See page 18

ALECTRYON

A. excelsum. NEW ZEALAND OAK. (T) 30-60 ft. A rare and little known tree, but deserving of popularity, as it has attributes that make it very valuable for California. It develops into a symmetrical, round-headed tree. Foliage pinnate, about the size and shape of Oregon Grape, glossy so that dust does not readily adhere to it. Very resistant to drought. Flowers inconspicuous, but seeds are covered with a showy scarlet pulp. Excellent as a street tree.

ANGOPHORA

A genus of Australian trees closely related to Eucalyptus, differing in having mature leaves opposite and distinct petals.

A. intermedia. Rather large tree with rough, fibrous, persistent bark. Leaves 2 to 4 inches long. Flowers small, in loose corymbs. Very fine, drought-resisting, shade and avenue tree.

A. lanceolata. Australia. (T) 30 ft. Graceful tree of small or medium size with slender branches. Flowers white, in clusters.

ARBUTUS

Trees or shrubs with handsome foliage and urn-shaped flowers, followed by showy, red berries. Bark on smaller branches very smooth and stripping off in paper-like flakes.

A. menziesi. MADRONE. Pacific Coast. (T) 60 ft. Our beautiful and distinct native tree. Its smooth, ruddy brown bark gives it a decided individuality among other trees. White flowers in panicles, followed by orange red berries. While common wild, it is almost unknown in cultivation owing to the great difficulty of growing from seed. Collected plants are usually worthless. Our stock is entirely nursery-grown seedlings.

A. unedo. STRAWBERRY TREE. Europe. (S) 10 ft. Moderate-sized shrub with clean, attractive foliage. White flowers appear in winter months and with them the large, red, strawberry-like fruits of the previous season. Very showy and handsome.

AUCUBA

Japanese shrubs of moderate size with large, glossy leaves and green bark. Bear berries about the size and color of a cranberry. It should be noted that the first and last varieties listed below may be either male or female; the second and third are female, and the fourth male. Only the female plants bear berries and one male plant of any variety should be included in each group to pollinate the others. All thrive best in partial shade

A. japonica. GOLD DUST PLANT. (S) 4-10 ft, Although the original form is doubtless a green-leaved plant, the name is commonly applied in the nursery trade to the form that has the leaves almost covered with yellow dots, accounting for the common name. Excellent for tub culture or planting out.

A. japonica longifolia. A variety of compact growth with long, narrow, green leaves and without variegation.

A. japonica serratifolia. Similar to preceding, but with toothed leaves. Bears profusely.

A. japonica maculata mascula. A form with especially brilliant variegation. Bears male flowers only, so is very useful to pollinate the other sorts.

A. japonica viridis latifolia. A very distinct variety of much more vigorous growth than the others. Leaves very large, coarsely toothed and rich, glossy green. The female plants bear very large berries, which contrast brilliantly with the foliage.



Acacia melanoxylon. BLACK ACACIA See page 18

AZALEA

ALALEA

A. indica. China. (S) 5 ft. Well-known, small, compact shrubs, covered in early spring with large, funnel-shaped, single or double flowers. They are perfectly hardy here. Thrive best in a cool, moist situation and fail in full sun. Colors range through purple, white and all shades and tints of red. Many named varieties are imported from Europe and Japan. Among the latter is A. hinodegiri, noted for its very early and profuse blooming; flowers red.

AZARA

A. microphylla. Chile. (T or S) 15 ft. Small tree of erect growth. Bark gray. Leaves very small, green and glossy. Flowers minute, yellow, with fragrance decidedly like chocolate. Handsome and graceful tree.

BERBERIS: Barberry

Shrubs of moderate size and free blooming habit. Flowers yellow. The evergreen species usually have prickly leaves. For the species with pinnate leaves see Mahonia.

B. darwini. Chile. (S) 4 ft. Shrub with many slender branches drooping toward tips. Leaves small, rich green, prickly like Holly. Many of the leaves turn bright red in fall, holding this tint through winter. Flowers golden yellow, produced in utmost profusion early in spring. Berries blue. One of the very finest small evergreen shrubs.

B. ilicifolia. South America. (S) 5 ft. Shrub of stronger growth than preceding and with larger leaves, about the size and shape of Holly. Some of the leaves fall during winter, but the majority become tinted and hold on until new growth appears. Flowers orange yellow, in clusters.

B. stenophylla, GARDEN HYBRID, (S) Shrub with long, slender, arching branches. Leaves small, long and narrow: dark green above, silvery beneath; spiny pointed with revolute margins. Flowers deep golden yellow.

BUDDLEIA

Shrubs native of semi-tropical regions. two species described below have similar foliage, but are so unlike in flowering habit as to appear of different genera.

B. globosa. Chile. (S) 10 ft. Medium-sized shrub with long, narrow, rough leaves. Flowers yellow, fragrant, in globular heads on long stalks.



Berberis darwini



Buxus sempervirens. Boxwood Standards

B. variabilis. BUTTERFLY PLANT, China. (S) 15 ft. Large shrub of extremely rapid, spreading growth. Leaves similar to preceding, but larger and very silvery beneath. Flowers lilac, marked with yellow, borne profusely in dense spikes nearly a foot long; extremely fragrant. A very good flowering shrub.

BUXUS: Box

Well-known, long-lived shrubs with small leaves and, mainly, of dense, compact growth. Flowers inconspicuous. Can be sheared or trimmed into almost any form. Splendid for formal hedges.

B. balearica. Spain. (S) 15 ft. Has larger leaves and stouter branches than common Box. Growth decidedly upright and faster than the others. Foliage light green.

B. fortunei rotundifolia. Quite distinct from all our other kinds. Of strong growth and makes a large shrub. Leaves large, nearly circular, reflexed, slightly glaucous above, whitish beneath. Branches downy.

B. japonica. JAPANESE BOX. (S) 6 ft, A handsome species characterized by its very glossy foliage, which has a pleasing, light green shade. Leaves usually notched at the tip. Makes an excellent hedge, as it is of very even and comparatively rapid growth, hence easily kept in shape.

B. japonica angustifolia. NARROW-LEAVED JAPANESE BOX. (S) 3 ft. Variety of preceding with remarkably long, narrow leaves. Growth slow and very compact. Makes an interesting specimen plant. Excellent for a very low hedge.

B. sempervirens. BOXWOOD. Europe, Africa and Asia. (S) 5-10 ft. Handsome shrub of dense, compact growth. Leaves quite small, deep green. Used for low, formal hedges. Also trained into various artificial forms such as round-headed standards, pyramids, globes, etc. Can be kept at any size and trimmed into any shape.

B. sempervirens arborescens. TREE BOX. (S or T) 25 ft. A variety with slightly larger leaves, of somewhat faster growth and ultimately making a small tree.

B. sempervirens aureo-marginata. GOLDEN-MARGINED BOX. A variety with brilliant golden variegation. Growth and habit similar to type.

BUXUS: Box-Continued

- B. sempervirens elegans variegata. ELEGANT VARIEGATED BOX. All leaves conspicuously variegated. Growth very regular, compact and symmetrical.
- B. sempervirens suffruticosa. DWARF BOX. The well-known, round-leaved, very dwarf form, much used for edging beds and walks. Can be kept from four to twelve inches high by trimming.
- B. sempervirens variegata. Variety with very brilliant variegated foliage. The variegation is creamy yellow turning white and disposed in bands and stripes.

CALLISTEMON: Bottle Brush

Showy flowering shrubs, natives of Australia and thriving perfectly in California. Flowers in the exact shape of a bottle brush, which gives the common name. Color ranges through several shades of red to nearly pink. Often known as Metrosideros.

(Callistemons are variable, particularly in color, which is usually red, but may run to pink even in any one species or variety. For this reason colors are not mentioned in following descriptions.)

- C. coccineus. Leaves narrow. Branches usually drooping.
- C. cunninghami. Leaves extremely narrow. Growth low and compact.
- C. floribundus pendulus. Growth very compact. The drooping branches are slender and short, well covered with foliage. Leaves short, broad and rather blunt.
- C. hybridus. Makes a small tree of irregular but vigorous growth. Flower spikes large and borne very profusely. The most useful form where a large plant is required.
- C. lanceolatus. Distinguished by its very short and broad leaves. Growth always erect and usually compact. New shoots very ruddy. Free bloomer.
- C. robustus. Branches stout and spreading, but not drooping. Leaves very long, narrow and usually curved.
- C. splendens. Branches very long and rather stout, often drooping.
- C. viridifolius. A variety with particularly handsome, deep green foliage.

CAMELLIA

Well-known Oriental shrubs. Foliage leathery and glossy. Flowers very handsome. Thrive best in partial shade and should never be allowed to get too dry.

- C. japonica. China and Japan. (8) 10-15 ft. The common and well-known Camellia. Grows very slowly, but begins blooming when very young. Colors range through white, pink and red. There are also varieties with variegated flowers. The double forms are best known, but we also grow seedlings, which have usually single flowers and are preferred by some for their simplicity and free blooming.
- C. sasanqua. China and Japan. (8) 6 ft. Distinct species from preceding. Shrub of loose habit. Leaves and flowers rather smaller than those of C. japonica; blooms much earlier. Leaves are dark green and glossy, downy along midrib on upper surface. Flowers are mainly white, slightly flushed, and borne freely. Very beautiful.

CAMPHORA

C. officinalis. CAMPHOR TREE. China and Japan. (T) 40 ft. A very handsome ornamental tree. Fine for street planting where an evergreen tree of moderate growth and regular form is needed. Leaves are pointed, glossy green, and strongly scented with camphor; many turn red during winter. Flower inconspicuous. The camphor of commerce is obtained from this tree.

CARPENTERIA

C. californica. California. (S) 10 ft. A splendid native shrub, bearing profusely clusters of large, fragrant, pure white flowers with yellow stamens, like greatly enlarged Mock Orange. Highly prized for both beauty and rarity.

CASSIA

All the Cassias in this group are shrubs and mainly of rather strong growth. Leaves pinnate; flowers yellow, saucer-shaped and borne in great profusion. Fond of full sunshine and fairly resistant to drought.

C. artemisioides. Australia. 6 ft. Readily distinguished from the rest by the ashy gray hue of the foliage and bark. Leaflets 6 or 8, very narrow and small. Flowers deep yellow. Very resistant to drought.



Callistemon hybridus. Bottle Brush



Camellia japonica See page 21

CASSIA-Continued

C. corymbosa. Argentina. 6 ft. Small shrub of graceful appearance, with slender branches and fine foliage. Leaflets usually six, narrow pointed. Not downy. Blooms very freely in crops at different times.

C. floribunda grandiflora. 10 ft. Good-sized shrub of loose habit. Branches and leafstalks smooth or nearly so. Leaflets usually ten, perfectly smooth. Flowers large, bright yellow with brown anthers. Free blooming.

C. laevigata. 6 ft. Very graceful and delicate appearing. Smooth throughout. Leaflets about 12 or 14, very narrow and small. Flowers small. Endures only moderate frosts. Very desirable where it will thrive.

C. polyantha. Shrub of very spreading growth. Leaflets 12 to 16, notched at tip, nearly smooth, but downy at base. Old leaves very dark green, new ones much lighter. Very free and continuous bloomer.

C. tomentosa. Mexico, 10 ft. Large shrub of very strong and erect growth. Very downy throughout. Leaflets 12 to 16, large, green above and gray beneath. Flowers large and borne very freely in crops. Excellent shrub for quick effect.

CASUARINA

Curious and unique Australian trees of quick growth. Destitute of leaves, their place taken by the numerous slender, green, jointed branchlets. Will grow on salty or alkaline soil. Commonly known as Beefwood or She Oak.

C. cunninghamiana. Australia. Growth strong and dense. Branchlets very numerous and fine, with very short internodes. A handsome, rapidgrowing tree.

CEANOTHUS

Shrubs with clean, glossy foliage. Perfectly hardy here and of easy culture. Flowers very small, in compact, showy panicles.

C. thyrsiflorus. CALIFORNIA WILD LILAC. California. (S) 20 ft. A native shrub, sometimes becoming a small tree. Leaves small and shiny. Flowers pale blue. One of our fine native plants.

Hybrid Varieties—The following garden hybrids are characterized by larger flower clusters and much longer blooming period:

Gloire de Plantieres. Flowers deep blue.

Gloire de Versailles. Has very large leaves and bright blue flowers. In bloom nearly all summer.

White Flowering. Similar to preceding, but with nearly white flowers.

CERATONIA

C. siliqua. CAROB. ST. JOHN'S BREAD. Mediterranean region. (T) 40 ft. Although of great economic value on account of its edible pods, this splendid tree is also one of the handsomest ornamentals adapted to our climate. It is of regular growth with spreading branches forming a rounded head. Leaves are pinnate, with large, leathery, deep green, glossy leaflets. Very resistant to drought and not inclined to become dusty.

CESTRUM

Large and quick-growing shrubs with rather large leaves. Produce an abundance of red, yellow or white flowers. Require little care except pruning to keep in shape. The red-flowering kinds have hitherto been listed as Habrothamnus.

C. aurantiacum. Guatemala. (S) 10 ft. A strong growing shrub with oval, wavy leaves. Flowers tubular, orange-yellow, about one and a half inches long and borne in clusters, followed by showy white berries. A fine winter bloomer.

C. elegans. Mexico. (S) 10 ft. Growth tall and slender, almost climbing. Young branches covered with reddish purple down. Flowers are about an inch long, deep, purplish red, in clusters at ends of branches.

C. fasciculatum. Mexico. (S) 12 ft. Similar to preceding, but with somewhat larger flowers, lighter red and without purplish hue. Flower clusters quite compact.

C. nocturnum. Jamaica, (S) 8 ft. Shrub of moderate growth. Leaves soft and pointed; flowers creamy yellow and very fragrant at night.

C. parqui. Chile. (S.) Somewhat similar to preceding, but with narrow leaves and greenish yellow flowers. Also fragrant at night.



Carpenteria californica See page 21



Cestrum aurantiacum See page 22

CHOISYA

C. ternata. MEXICAN ORANGE. (S) 8 ft. Compact shrub of rather slow growth. Leaves light green, divided into three leaflets; fragrant when crushed. Bears a profusion of white, very fragrant flowers in broad clusters.

CINNAMOMUM: Cinnamon

Trees and shrubs with aromatic foliage, closely related to Camphor. Foliage medium-sized, clean, glossy and attractive. Sufficiently hardy for most parts of California.

C. cassia. CASSIA-BARK TREE. China. (T) 40 ft. Medium-sized tree with yellowish green foliage and bark, in which the characteristic cinnamon odor is strongly marked. About as hardy as the Camphor, but a stronger and faster grower.

C. loureiri. Japan and China. (T) 30 ft. Small tree or large shrub. Distinguished from preceding species by its darker and more leathery leaves with three deeply sunken veins. Perfectly hardy here.

CISTUS: Rock Rose

A class of small or medium-sized shrubs of compact growth, bearing a profusion of flowers shaped like a single rose.

C. albidus. Southern Europe. (S) 4 ft. Foliage woolly white. Flowers lilac pink, two or three inches wide. Blooms continuously. Very resistant to drought.

C. ladaniferus maculatus. SPOTTED ROCK ROSE. Europe. (S) 3 ft. Spreading shrub of prostrate growth. Foliage covered with aromatic resin (ladanum). Flowers large often four inches wide, pure white except for a conspicuous crimson

spot at base of each petal. Free flowering and very handsome indeed. Particularly desirable where very low growth is wanted.

C. laurifolius. Europe. (S) 6 ft. Of strong and rather quick growth. Leaves large, dark green. Flowers of medium size, clustered; white with yellow spot at base of each petal. The hardiest species.

C. monspeliensis. Europe. (S) 5 ft. Erect shrub with a profusion of fine, wire-like branches; leaves small. Flowers white, small, but produced very freely.

C. salvifolius. Mediterranean region. (S) 3 ft. Small shrub with long, slender, often drooping branches. Leaves small, very rough, wrinkled and downy. Flowers medium sized, white, borne on long, slender stalks.

CNEORUM

C. tricoccum. SPURGE OLIVE. Southern Europe. (S) 3 ft. A decidedly curious and unique shrub. Leaves willow-like and of a most unusual shade of deep bluish green. Flowers small, yellow; followed by red, three-parted berries.

COPROSMA

C. baueri. New Zealand. (S) Low-growing shrub, or can be trained up as a low climber. Leaves are rounded, green and wonderfully glossy, exceeding any plant we know of in this respect—dust will not stick to them. Flowers are inconspicuous, but followed by clusters of showy, yellow herries.

C. baueri variegata. Variety of preceding, differing only in the very conspicuous yellow variegation of the leaves. Probably the showiest variegated plant in our collection.

CORDIA

C. francisi. S. America. (S) Rare shrub of tall growth, with dark green leaves and white, tubular flowers.



Coronilla glauca and C. glauca varicgata See page 24

CORNUS: Dogwood

C. capitata (Benthamia fragifera). EVERGREEN DOGWOOD. Himalayas. (S) 15 ft. A splendid shrub of rather large size. Flowers are large, like those of the Eastern "Flowering Dogwood" or the Pacific Coast species, but the plant is far more successful under cultivation in California than either, with the further advantage of being entirely evergreen. Flowers are cream colored, becoming ruddy before falling, followed by large, red, showy fruits, which are edible but insipid. Altogether this is a most beautiful plant and will be widely grown when better known. At present it is quite rare.

CORONILLA

Shrubs with pinnate leaves. Flowers usually yellow, in ring-shaped clusters like a little crown, whence the name.

C. emerus. SCORPION SENNA. S. Europe. (S) 5 ft. Leaves deep glossy green. Flowers yellow, sometimes tinged red. Blooms in spring and early summer.

C. glauca. S. Europe. (S) 5 ft. Rather similar to above, but with fine and very glaucous foliage. Flowers deep golden yellow, intensely fragrant by day, but scentless at night. Very free bloomer. Especially valuable as it commences blooming early in the winter and continues through the spring.

C. glauca variegata. A form of the preceding; identical except that the foliage is conspicuously variegated.

CORYNOCARPUS

C. laevigata. NEW ZEALAND LAUREL. (S or T) 40 ft. A handsome, large shrub or tree with large, entire, smooth, glossy leaves with recurved margins, resembling those of Magnolia grandiflora. Flowers are white, borne in large, terminal panicles, followed by plum-like fruits.

COTONEASTER

Shrubs, some of upright growth, others almost trailing. Leaves small to minute. Flowers very small, but numerous, followed by small, usually red, berries. A very desirable class of shrubs, which are rapidly attaining great and deserved popularity.

C. acuminata (C. nepalensis). Himalayas. (S) 6 ft. Growth erect. Leaves medium sized and pointed. Flowers pinkish-white, followed by large, showy, red berries. Semi-evergreen.

C. angustifolia. China. (S) 8 ft. Growth spreading, somewhat spiny. Leaves long and narrow. Berries very abundant, orange yellow; develop their color late and hold it throughout the winter.

C. buxifolia. Himalaya Mountains. (S) 3 ft. Very similar to C. microphylla, possibly identical.

C. francheti. China. (S) 8 ft. Growth upright, Well distinguished by its very arching branches, which give it a most graceful habit. Leaves about the size of C. acuminata, but downy. Flowers pink, Berries yellowish red.

C. frigida. Himalayas, (S) 20 ft. A very strong-growing species with leaves as much as four inches long. Flowers white. Berries brilliant scarlet, in large clusters. When loaded with a heavy crop of berries it is indeed a remarkably striking specimen. Grows very vigorously and should be well pruned.

C. horizontalis. China. (S) 2 ft. One of the best trailing shrubs. Branches grow almost on the ground. Leaves very small and turn red during winter. Flowers pinkish white. Berries bright red and borne in great profusion. Nearly deciduous.

C. microphylla. Himalayas. (S) 2 ft. Very densely branched and of almost prostrate growth. Leaves small, glossy and very dark green. Flowers white. Berries larger than those of preceding and purplish red. Entirely evergreen.



Cornus capitata. Evergreen Dogwood

C. microphylla thymifolia. (S) 1 ft. A variety of preceding of dense, compact growth, with tiny leaves, smaller flowers and berries. A very dainty little plant.

C. pannosa. China. (S) 10 ft. A very beautiful shrub of upright growth. Branches long, slender and slightly arching, covered with purplish mahogany bark. Leaves deep, rich green above and covered with silvery down beneath and along edges. Flowers white. Berries, borne in great profusion in the fall, are vermilion red. The branches loaded with berries can be cut and kept in water for weeks.

CYTISUS: Broom

Shrubs with pea-shaped flowers and clover-like leaves. Some kinds have very few leaves, the green branches assuming their functions. They are very free blooming, of the easiest culture and will thrive almost anywhere. For Brooms not included below, see Genista and Spartium.

C. albus. PORTUGAL BROOM. Europe and Africa. (S) 5 ft. Shrub of moderate size, with long, very slender branches, covered in early spring with numerous small, pure white flowers. The long shoots covered with the dainty blossoms are very beautiful for cutting.

C. canariensis. Canary Islands. (S) 10 ft. Moderate-sized shrub of dense growth. Branches very downy. Leaves downy on both sides. Flowers in numerous dense racemes, bright yellow and fragrant.

C. candicans. Canary Islands. (S) 10 ft. Forms good-sized shrub. Foliage fine, slightly downy at first. Flowers small, yellow, fragrant and borne in the utmost profusion.

C. racemosus (Genista racemosa). (S) 6 ft. Medium-sized shrub, highly desirable for its extreme floriferousness. Has yellow flowers in long racemes. In bloom most of the time. Garden hybrid.

C. scoparius. SCOTCH BROOM. Europe. (S). Easily recognized by its ridged branches. Flowers rather large, clear yellow. Seed pods almost black.

C. scoparius andreanus. A very beautiful variety of the Scotch Broom. Identical in all respects except the flowers, in which the side petals instead of being clear yellow are deep mahogany red. Being a very free bloomer, it is most desirable.

DAPHNE

D. odora. WHITE DAPHNE. China and Japan. (S) 4 ft. Small shrub of slow growth. Flowers white or creamy, intensely fragrant and massed in dense clusters at ends of branches. Blooms during the winter.

D. odora marginata. PINK DAPHNE. (S) 4 ft, Although a variety of the foregoing it is quite distinct; the leaves are edged creamy white and the flowers are pink.

DAPHNIPHYLLUM

D. macropodum. Japan. (S) 10 ft. Growth shrubby, like Photinia serrulata, and has leaves nearly as large, borne in rosettes with showy, ruddy stalks. Assumes globular shapes without trimming. Very rare and handsome.

DEERINGEA

D. celosioides variegata. Australia. (S) 12 ft. Slender-growing shrub. Leaves margined with white. Long spikes of white flowers during summer. Growth extremely strong; will climb if shoots are trained up.

DIOSMA

D. ericoides (D. alba). BREATH OF HEAVEN. Africa. (S) 4 ft. Well-known, small shrub. Foliage minute and heath-like; very fragrant, especially if bruised. Flowers are white, very small and star-shaped; borne in such profusion as almost to cover the entire bush.

D. purpurea. S. W. Africa. (S) 2 ft. Very rare shrub. Foliage coarser than preceding. Flowers delicate purple, in terminal clusters, borne in great abundance even on very small plants.



Cytisus albus. Portugal Broom

DODONAEA

D. cuneata. Australia. (S) 6 ft. Graceful shrub with many very slender, brown branches. Leaves about an inch long, very narrow at base, widening to one-fourth inch at end, tipped with a small point. Flowers minute, reddish green, in small racemes.

DURANTA

D. plumieri. GOLDEN DEW DROP. South America. (S) 12 ft. Foliage light, pleasing green. Flowers are lilac-blue in racemes, followed by yellow berries. A very pretty summer bloomer. Will endure only a moderate amount of frost.

ECHIUM

Strong-growing shrubs with small flowers in spikes or clusters. Thrive greatly in dry ground.

E. fastuosum. Canary Islands. (S) 6 ft. Growth extremely rapid, with coarse, stout branches. Makes a big bush twice as wide as tall. Leaves long, narrow and silky. Flowers clear, brilliant blue, in numerous erect spikes, at times almost covering the whole plant. Splendid for quick results.

E. roseum. (S.) Of loose growth. Flowers in clusters, pale pink. Suitable for dry banks.

ELAEAGNUS

E. pungens argentea. Japan. (S) 6 ft. Shrub of striking appearance. Leaves large, wavy-margined; smooth above, except for numerous small, brown, waxy specks, silky beneath; strongly margined with creamy white.

E. pungens aurea. Identical with preceding except in color of leaves, which are bright yellow with green margins.

ERICA: Heath or Heather

Low-growing shrubs, some even trailing, with very minute leaves and almost innumerable small tubular flowers.

E. mediterranea. MEDITERRANEAN HEATH, Europe, (S) 4 ft. One of the most popular Heaths. Forms a densely branched, perfectly globular shrub, with dark green leaves. In winter it is simply covered with tiny pink flowers.

E. melanthera. (S) 5 ft. Another splendid winter-blooming Heath. Of less regular growth than preceding. Flowers a little larger, rosy with conspicuous, protruding, black-tipped stamens. This also is a wonderful bloomer.

E. multiflora grandiflora. (S) 2 ft. Of dense and spreading growth. Flowers purple, in long spikes. Blooms all summer.



Escallonia montevidensis



Escallonia rubra

E. persoluta alba. (S) 2 ft. Erect but very small, completely covered with pure white flowers. Spring bloomer.

E. persoluta rosea. Similar to preceding. Flowers rosy white.

ESCALLONIA

Flowering shrubs from South America, with clean, glossy foliage. Flowers white, pink or red, rather small, but more or less clustered.

E. berteriana. (S) 15 ft. Shrub of erect habit and good growth. Foliage dark green and glossy. Flowers white, rather small, in very long, loose, erect panicles. Continuous bloomer.

E. leucantha. (S) 8 ft. Very similar to E. berteriana, but a smaller shrub. Flowers white.

E. montevidensis (E. floribunda). (S) 12 ft. Large shrub of symmetrical habit and glossy green leaves, which are almost identical with those of E. berteriana, but are notched instead of acute at apex. Flowers pure white, borne in large, compact, terminal cymes or panicles in late summer or fall. The clusters are produced in such great profusion as to cover completely the entire plant. By far the handsomest of the white kinds, but very rare on account of great difficulty of propagation.

E. rosea. (S) 10 ft. Growth strong and upright. Leaves rough, serrate and with resinous glands beneath. Flowers pink, in conspicuous terminal racemes. Very handsome species.

E. rubra. (S) 5 ft. Compact shrub of rather slow, dense growth, with large, very dark leaves, shining above, dull and resinous beneath. Flowers rather dark red, in short terminal clusters.

E. virgata (E. philippiana). (S) 8 ft. Growth comparatively erect, slightly spreading. Branches light brown; foliage rather profuse. Flowers white, small and produced over an extended season.

EUCALYPTUS

Eucalyptus trees thrive so well in California and such large specimens can be seen that many believe them indigenous. This is incorrect, as they are all from the Australian region. Each year sees a wider planting of Eucalyptus, and we doubt if it can be carried too far. In spite of the extremely rapid growth of most kinds, the wood is mainly hard and strong; in fact, many species surpass even Hickory in this respect. Some yield valuable oils, others are desirable for their flowers. Those wishing more detailed information regarding the commercial species are advised to procure Bulletin No. 196 of the Agricultural Experiment Station, University of California, Berkeley. Unless otherwise specified, the following form large trees. It will be noted, however, that some are comparatively dwarf.

E. alpina. 12 ft. Makes only a shrub. Leaves very short and oblique at base. Flowers white. Useful as a large shrub.

E. amygdalina angustifolia (E. linearis). One of the most beautiful on account of its graceful habit, dense foliage and remarkably narrow, light green leaves. Flowers white.

E. angulosa (E. incrassata angulosa). 25 ft. Small tree with short, blunt leaves. Flowers white. Named from the ridges or angles on seed capsule.

E. bicolor (E. largiflorens). BLACK BOX. 25 ft. Shrub or small tree with drooping branches and persistent bark. Leaves of medium length. Wood hard, tough and durable in or out of ground.

E. calophylla. 20 ft. Growth and foliage about like E. ficifolia, but not wavy margined. Flowers well in coast district. Very hardy.

well in coast district. Very hardy.

E. citriodora (E. maculata citriodora). LEMON-SCENTED GUM. Tree of rapid, erect growth. When young, leaves are rough, hairy and without stalks; when tree is older, they are stalked, very smooth and curved. Foliage is strongly impregnated with lemon scent. Flowers creamy white. The trunk sheds its bark every year during its blooming period, leaving it milky white and absolutely smooth. Has the peculiarity of developing most of its branches toward the prevailing wind. Very sensitive to frost when young.

E. coriacea (E. pauciflora). WHITE GUM. Rather tall tree with spreading branches and slen-



Eucalyptus globulus compacta BUSHY BLUE GUM



Eucalyptus leucoxylon (Red-flowering) See page 28

der twigs. Outer bark strips, I ers white. One of the hardiest. Leaves long. Flow-

E. corynocalyx. SUGAR GUM. An excellent species, attaining good size. Bark strips. Has two forms of leaves. Very resistant to drought and hot, dry winds. Timber strong and durable, especially in the ground, not likely to warp, and resistant to ants and insects.

E. diversicolor (E. colossea). KARRI. Very large, tall tree with smooth, white bark. Leaves dark green and glossy. Does best toward the coast. Has beautiful red, hard, durable wood, taking a

E. ficifolia. SCARLET-FLOWERING GUM. Contrary to the habits of most Eucalyptus, this species is dwarf and of slow growth. Leaves large, leathery, pointed, wavy-margined, dark green. Flowers very large and normally crimson or scarlet, but vary considerably, sometimes appearing pink or orange. Has the handsomest flowers of all.

orange. Has the handsomest flowers of all.

E. globulus. BLUE GUM. By far the most widely planted species in this country. Growth exceedingly rapid, probably more so than of any other known tree. Old leaves long and tapering. Flowers yellowish white. Has a white, hard, closegrained wood of great strength, now being used in preference to oak and hickory where their qualities are demanded. Not good for posts, etc., as it soon decays in the ground. Admirable for fuel, as it will renew itself continually from sprouts after being cut. Succeeds in a great variety of soils and conditions, but not well adapted to particularly dry ground. Endures about 10 degrees of frost. Foliage is used to obtain eucalyptus oil. Except where actual experiment has shown other species to be better, this is the safest one by far for general planting.

E. globulus compacta. BUSHY BLUE GUM. A

eral planting.

E. globulus compacta. BUSHY BLUE GUM. A very distinct and valuable variety introduced by this Company. With no pruning whatever, it forms a symmetrical, rounded, compact tree. It does not form any main trunk and the branches are indefinitely divided, giving a solid mass of foliage from the ground to top. Lower foliage is like that on young growth of common Blue Gum, but considerably smaller and even more silvery. When five or six years old it commences to develop the longer, narrow leaves toward the top. It makes a fine single specimen and is also, beyond any doubt, the most efficient wind break that can be planted in California. California.

EUCALYPTUS-Continued

E. gunnl. CIDER GUM. Usually small, but sometimes large tree. Leaves small and without the usual pungent odor, and readily eaten by stock. One of the most resistant to frost.

E. lehmanni. An ornamental variety of medium size, probably of no economic value. Small tree. Flowers greenish yellow. Remarkable for the peculiar habit of the seed pods, which grow together, forming a large ball.

E. leucoxylon. WHITE IRONBARK. Tall tree, usually branching not far from ground. Bark strips off, leaving branches smooth. Flowers are white or pink, but as we grow all our stock from one of our specimen trees with very brilliant, nearly one of our specimen trees with very ormant, nearly red flowers, we believe the majority of plants sent out will be similar. Blooms in fall and spring. Val-uable bee tree, as honey is good. Timber remark-ably strong, hard and durable, heavier than water.

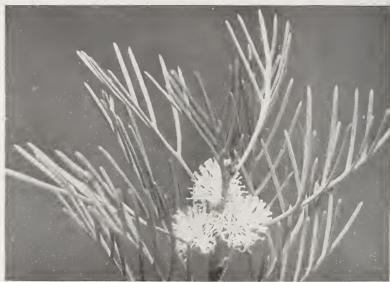
E. macrorhyncha. VICTORIA STRINGY BARK. Tall tree with gray, furrowed bark. Leaves of medium size, thick and leathery. Wood hard and durable. Bark used in Australia for roofing sheds and said to last twenty years. Hardy and does best toward coast.

E. robusta. SWAMP MAHOGANY. Very handsome tree of moderate size and quick growth. Leaves leathery, dark, glossy green, much like those of E. ficifolia, but larger and not usually wavy-margined. Flowers are yellow and extremely numerous. Timber though brittle is very durable and dark, handsome red, which, together with its ability to thrive on damp soil, gives it the name of Swamp Mahogany. Bark is rough and always persistent. Highly resistant to frost.

E. rostrata. RED GUM. Next to Blue Gum this is at present the most popular for large plantations. Growth is rapid. Flowers white, very small and borne in compact clusters. Will stand extremes of both heat and cold, being one of the best for very hot sections, also quite resistant to frost. Timber is heavy, strong and extremely durable, both above and below ground. Excellent for fuel. About the best species for very hot and dry regions.

gions.

E. rudis. DESERT GUM. An excellent tree, attaining considerable popularity in California both as an avenue tree and for forest work. For the former purpose it is particularly suitable on account of not shedding its bark and for its fine, compact habit. Wood is light brown, hard and readily polished.



Hakea suaveolens See page 31

E. muelleriana. YELLOW STRINGY E Another tall species with fibrous bark. T strong and durable, especially in the ground. BARK. Timber honey yielder.

E. obliqua. MESSMATE GUM. STRINGY BARK. Has a persistent bark, which is very fibrous, hence the common name. Greatly valued in Australia for bees. Will grow on dry and poor soil, but does not stand much frost. Wood not of much value.

E. occidentalis. FLAT-TOPPED YATE. A small tree of moderate growth. Flowers yellowish white. Young leaves are red, giving it a highly ornamental appearance.

E. piperita. PEPPERMINT STRINGY BARK. WHITE STRINGY BARK. Tall tree, erect and well formed, with fibrous and persistent bark. Bruised foliage has a strong peppermint odor. Does best toward coast.

E. polyanthemos. RED BOX. AUSTRALIAN BEECH. Among the handsomest and most ornamental. The growth is inclined to be irregular and picturesque, very much branched. Bark on the branches is smooth, varying from greenish to bluish white. The foliage is very silvery and appears to fine advantage when planted near trees of more somber hue. Flowers are white, borne in clusters. Wood is hard and excellent. Very resistant to drought. Makes a handsome and effective windbreak. break.

E. siderophloia. LARGE-LEAVED IRONBARK. Large tree with persistent, rough bark and long, narrow leaves. Growth erect and moderate. Endures both heat and cold. Timber is yellowish white, very strong and durable.

white, very strong and durable.

E. sideroxylon. RED IRONBARK. Fine tree of moderate growth. Bark is persistent and brownish red. Leaves and flowers are both variable, the former from deep to light bluish green, the latter from creamy white to pink and red. Wood is dark and particularly hard, heavy and durable.

E. tereticornis. GRAY GUM. FLOODED GUM. Tall, slender tree with drooping branches and deciduous, smooth bark; leaves long and broad, grayish green. Will thrive in very wet soil. Timber is close-grained, tough, strong and durable in or out of ground. Grows rapidly and endures both heat and cold.

of ground. Grows rapidly and endures both heat and cold.

E. viminalis. MANNA GUM. A very tall, rapid-growing and hardy species. Has been called Red Gum from the ruddy color of the ends of growing shoots. Bark sometimes persistent, sometimes stripping off. Very valuable for its resistance to frost and strong winds. Timber not particularly valuable except for fuel and box shooks; splits more easily than most kinds.

E. viminalis fertilis. Variety of preceding. When young the foliage is quite distinct, being glaucous and without leafstalks.

E. virgata. Shrub or small tree with stringy bark. Leaves slender, thick and glossy.

EUGENIA

Shrubs closely related to Myrtle, having white or creamy flowers of similar form, followed by berries, which, in most species, are edible. For other plants often included under Eugenia see Myrtus.

E. myrtifolia (E. australis). BRUSH CHERRY. Australia. (S) 15 ft. Tall, handsome shrub of erect, compact growth. Leaves dark, glossy green when fully developed, but very ruddy on new growth. Blooms profusely, flowers creamy. Berries violet or purple, edible.

E. uniflora. SURINAM CHERRY. Very handsome shrub with large, dark green, glossy leaves and showy, edible fruit, which is used in Brazil for making sherbets, jams and preserves. Delicious when fully ripe. A fine plant in every way.

the edges, blotched in the center with light and dark green. Does not "sport back" to the green type.

E. japonicus aureo-variegatus. GOLDEN VA-RIEGATED EUONYMUS. Branches green; leaves yellow in center, dark green around edges. Color about equally divided. Often sends out branches with green leaves.

E. japonicus microphyllus (E. pulchellus). (S) 3 ft. Very distinct sort of dwarf, compact habit. Leaves very small, dark green, slender, serrated. Fine for edging.

E. japonicus microphyllus variegatus. (S) 3 ft. A variety of the preceding. Leaves have silvery white edges, which contrast beautifully with the dark background.

E. japonicus viridi-variegatus. DUC D'ANJOU. Very vigorous and of spreading growth. Branches green. Leaves dark green toward the edges, striped in the center with light green and pale yellow.



Japanese Garden. In foreground: Fatsia japonica

EUONYMUS

The evergreen sorts are grown for their very handsome foliage, which varies considerably and includes many variegated forms. In some parts of the State they bloom and bear heavy crops of curiously formed, showy, red and orange berries during fall and winter.

E. japonicus. Japan. (S) 15 ft. Fine, upright shrub of moderate size and rather compact growth. Foliage and bark are clear, dark green. Has many variegated forms, as follows:

E. japonicus albo-marginatus. SILVER-MAR-GINED EUONYMUS. (S) 5 ft. Leaves have a very narrow margin of silvery white. Growth slow and compact. Entirely distinct.

E. japonicus albo-variegatus. SILVER VARIE-GATED EUONYMUS. (S) 12 ft. Of strong, erect growth. Branches very light green. Leaves almost white around edges, changing to yellow as season advances, making a beautiful hedge and excellent for landscape work.

E. japonicus aureo-marginatus. GOLDEN EU-ONYMUS. (S) 6 ft. Of dwarf and compact growth. Branches light green. Leaves deep yellow toward E. radicans argenteo-marginatus. With us a shrub of compact and rather erect growth, but in some sections becomes a climber. Leaves considerably smaller than E. japonicus, silvery white around edges, dark green toward center, faintly marked with light green. Very handsome.

FATSIA: Aralia

Foliage plants becoming small trees. Leaves very large and palmately lobed, on long leafstalks.

F. japonica (Aralia sieboldi). Japan and China. (S) 8 ft. Shrub with one or several undivided, stout stems. Leaves smooth and deep, glossy green. Splendid for pot culture as a porch plant. In open ground should have at least partial shade. Flowers, like English Ivy, in round clusters.

F. japonica variegata. Variety with conspicuous variegation. Usually of more compact growth.

F. papyrifera. CHINESE RICE PAPER TREE. Formosa, 20 ft. Tall shrub. Young branches and lower surface of leaves covered with dense, white down. Flowers greenish white. This is one of the plants from which the Chinese make rice paper.

FICUS

A curious and extremely variable genus, including the Rubber Trees, the common edible fig and also climbing forms. The following (except the last species) come under the head of Rubber Trees:

- F. elastica. INDIA RUBBER PLANT. Asia. (T) 100 ft. Handsome ornamental plant for pot culture, but almost too tender to grow outside except in very favored sections. Leaves large and glossy, surrounded while developing by pink, membraneous sheath.
- F. macrophylla. MORETON BAY FIG. Australia. (T) 100 ft. Similar to preceding, but much hardier, with smaller leaves; dark green above, light green beneath. Sheath almost white. There are many very large trees of this scattered over California.
- F. rubiginosa (F. australis). (T) 75 ft. Of the same general habit as the two preceding species. Leaves are more rounded, dark green. smooth and glossy above, rust colored beneath. Sheaths white. About as hardy as F. elastica.

GENISTA: Broom

Closely related to Cytisus; the names often being interchanged. Flowers pea-shaped, yellow or white. (See Cytisus.)

- **G.** aetnensis. Sicily. (S) 6 ft. Graceful shrub with very slender, green branches and few leaves. Flowers deep yellow. Blooms during summer.
- **G.** monosperma. BRIDAL VEIL. Spain; Africa. (S) 10 ft. Handsome shrub with very fine, drooping, silvery branchlets. Almost leafless. Flowers white, borne profusely in early spring. Rare and very handsome.

GREVILLEA

- G. robusta. SILK OAK. Australia. (T) 150 ft. Good-sized tree of rapid growth. Leaves large, deeply dissected, fern-like. Flowers orange-yellow, curiously formed, very sweet scented. Very resistant to drought, but only moderately to frost. Should be kept well pruned, as long branches are liable to be broken by strong winds.
- G. theiemanniana. (S) 6 ft. A very dainty, graceful shrub. Finely branched and densely covered with fine, needle-like leaflets of a soft, pleas-



Hypericum moserianum See page 31

F. ulmifolia. Philippines. (T.) Entirely distinct from preceding kinds and does not resemble the Rubber Trees. Leaves, as name indicates, resemble those of the Elm. They are large, serrate along margins, with a long point at end; covered above and beneath with minute bristles, making them very rough to the touch. Bears edible figs. Not tried out yet in California, but appears quite hardy.

GARRYA

G. elliptica. California. An evergreen shrub with elliptical leaves, dark green and shining above, hoary beneath. Flowers greenish white, borne in elegant pendulous catkins, 6 to 15 inches in length. Wonderfully attractive at blooming time. Very rare in cultivation.

ing green. Flowers are in small clusters, ruddy pink with green tips. It is no exaggeration to say that this is the freest blooming shrub grown in the State, as it blooms throughout the entire year. Splendid in every way.

HAKEA

Interesting genus of shrubs or small trees. All from Australia. The different species show great diversity in foliage, growth and habit. Very resistant to drought and quite hardy here.

H. laurina (H. eucalyptoides). SEA URCHIN. (S) 20 ft. Large shrub with leaves four to six inches long. Flowers clustered into a ball, red with yellow, protruding styles.

H. saligna. WILLOW-LEAVED HAKEA. (S) 8 ft. Medium-sized shrub with long, slender, pale green leaves and small clusters of white flowers.

H. suaveolens (H. pectinata). (S) 10 ft. Compact shrub of very unusual appearance. Leaves divided into needle-like lobes, tipped with a very sharp, stiff point. It is abundantly able to take care of itself and will not be molested. Flowers white, borne quite freely in globular clusters. Highly resistant to drought.

HETEROCENTRON

H. mexicanum (Heeria rosea). Mexico. (S) 2 ft. Small shrub with square stems. Flowers nearly white, flushed rose. Very dainty and pretty. Suitable for greenhouse culture or nearly frostless localities.

HYMENOSPORUM

H. flavum. Australia. (S or T) 40 ft. Very tall shrub or tree with large, entire, broad leaves. Flowers are large, white, quickly turning bright yellow, and very fragrant. Being a very free bloomer over quite a long period, it is a most desirable specimen and worthy of much more extended planting. At present it is quite rare.

HYPERICUM

H. moserianum. Garden hybrid. (S) 2 ft. Pretty, low-growing shrub; valuable for borders. Foliage light green; flowers large, deep yellow with five spreading petals and numerous long stamens tipped with reddish anthers. Blooms almost continuously. Does best in partial shade.

ILEX: Holly

While a large genus, there is practically but one species grown here, the English Holly and its numerous varieties, which differ widely in the color of foliage.

1. aquifolium. ENGLISH HOLLY. (T) 40 ft. Well-known, small tree with leathery, dark green, prickly leaves; inconspicuous flowers and numerous red berries on fertile plants. Growth usually very slow. Requires plenty of moisture.

To avoid repetition, will say that all the following are varieties of the preceding and the only description necessary is of the leaf characteristics, as there is little variation in the berries. They are usually of more compact growth.

I. aquifolium bicolor. Growth very strong. Leaves very dark green in center, margins yellowish green. Slightly or not at all serrated.

I. aquifolium Golden-Margined. Growth strong. Leaves rather slightly serrated: center dark green, margin narrow, deep yellow. Berries very large.

I. aquifolium Golden Queen. Growth slow. Leaves rather broad and short, dark green with broad, deep yellow margin. Serration rather coarse.

I. aquifolium Golden Variegated. Growth moderate. Leaves brilliantly variegated with golden yellow.

I. aquifolium pendula variegata. An interesting form of somewhat drooping habit. Foliage conspicuously variegated.

I. aquifolium Scotch Golden. Growth slow. Leaves very dark green in center, with broad, deep yellow margin. Serration moderately coarse.

I. aquifolium serratifolia aurea. Growth slow. Leaves dark green with narrow, creamy yellow margin. Serration fine and sharp.

I. aquifolium Silver-Margined. Growth strong. Leaves deeply serrated; center dark green, margin narrow, cream colored.

I. aquifolium tortuosa. Growth moderate. Habit dense. Serration slight. Leaves stiff and strongly twisted, dark green. A curious form.

IOCHROMA

Shrubs similar to Cestrum, but coarser and with larger leaves. Growth strong, flowers long, subular and clustered.



Ilex aquifolium. English Holly

I. fuchsioides. South America. (S) 8 ft. Growth moderate, flowers drooping, orange scarlet, very handsome.

1. lanceolata purpurea. South America, Moderate-sized shrub with downy branches. Flowers purple, in large clusters.

JACARANDA

J. ovalifolia (J. mimosaefo'ia). Brazil. 50 ft. Symmetrical tree with bipinnate, extremely finely divided, large leaves. Flowers tubular, violet blue, in large panicles. Too tender for sections that have severe frosts. Highly valued wherever it will thrive.

LAGUNARIA

L. patersoni. Australia. (S or T) 20 ft. Small tree with ovate, entire leaves. Flowers large, pale rose, similar to Hollyhock or Hibiscus and borne freely. Handsome.

LAURUS: Laurel

L. nobilis. BAY TREE; SWEET BAY; GRECIAN LAUREL. Mediterranean region. (S or T) 40 ft. This is the historic Laurel of the Greeks, sacred to Apollo and used to crown the victors in the ancient Olympian games. Planted out, it makes a narrow, erect tree, branching close to the ground. It is more commonly grown as a tub plant with a straight stem and compact, round head, or in pyramidal form. In these forms is often called Belgium Laurel or Bay Tree. One of the very best plants for porch use, hotel corridors, formal gardens, etc.



Leptospermum laevigatum Australian Tea Tree

LAVENDULA: Lavender

L. vera. Mediterranean region. (S) 4 ft. Well-known, small shrub with gray, downy, small, narrow leaves, and spikes of very aromatic, blue flowers on very long stalks. Makes a fine border.

LEPTOSPERMUM

L. laevigatum. AUSTRALIAN TEA TREE. (S) 20 ft. Large, spreading shrub with small, glaucous leaves, entirely covered in early spring with small flowers, having five white, spreading petals and pinkish center. An Australian shrub that thrives remarkably well in California.

LEUCAENA

L. glauca (Acacia leucocephala). Mexico. (S.) Shrub or small tree closely related to Acacia and Mimosa. Growth very spreading. Leaves bipinnate with red stalks. Flowers white, in large, globular heads. Starts blooming when very small.

LIGUSTRUM: Privet

Shrubs or even trees, mostly of quick growth. Leaves always opposite and flowers white. Several sorts are used as hedge plants, for which they are well adapted. Authorities differ greatly as to names and descriptions of the different species.

L. coriaceum. Japan. (S) 6 ft. Shrub of dwarf, compact, slow growth. Leaves numerous, leathery, very dark green and glossy, convex above.

L. gracile variegatum. (S) 10 ft. Variety of graceful and erect growth. Twigs long and very slender. Leaves ovate with revolute margins and a smooth, waxy surface. The variegation is cream-colored, remarkably brilliant and profuse, some

leaves being entirely without any green tint. Does not sunburn nor sport back. One of the very best variegated shrubs. Name provisional; real species unknown.

L. japonicum. JAPANESE PRIVET. (S or T) 10-40 ft. Large shrub or tree, with leathery, dark green, glossy leaves and white flowers. Remarkably good for a tall hedge and also makes a handsome flowering tree.

L. lucidum tricolor. THREE-COLORED PRIVET. (S.) Pleasing and novel shrub of strong, upright growth. Leaves green, with broad white margin, often with ruddy tints. Young growth vivid red.

L. lucidum variegatum. VARIEGATED PRIVET. (S) 15 ft. Habit similar to Japanese Privet. Leaves blotched light and dark green, with narrow, light yellow margin. Quite showy and of quick growth.

L. ovalifolium. CALIFORNIA PRIVET. Japan. (S) 15 ft. A strong-growing, pyramidal shrub, with bright green, medium-sized leaves; white flowers in Junc. One of the best low-priced hedge plants. Can be kept trimmed at any height.

L. sinense. CHINESE PRIVET. China and Korea. (S) 8 ft. Shrub with very leathery, acute leaves; smaller than those of preceding, dark green above, light green beneath. Flowers white, very fragrant, in large, erect panicles.

L. spicatum macrophyllum. Japan. (S) 10 ft. Shrub of spreading but compact growth. Leaves large, leathery, very dark green and glossy above, light green beneath. Easily one of the handsomest.

L. vulgare. EVERGREEN or ENGLISH PRIVET. Europe; Africa; Asia. (S) 15 ft. Hedge plant. Leaves small and dark green. Spikes of fragrant, white flowers in June, followed by numerous clusters of black, shining berries. If symmetrically pruned, it cannot be surpassed for hedges.

LYONOTHAMNUS

L. floribundus asplenifolius. ISLAND IRON-WOOD; WESTERN IRONWOOD. Santa Barbara Islands. (T) 75 ft. An extremely rare and very beautiful native tree, growing naturally only on the islands along Santa Barbara Channel and Catalina Island. Growth is tall, erect and rather stender. Bark on trunk is fibrous and reddish brown; on small branches and twigs it is shining red. Leaves are opposite, pinnately divided into long, narrow leaflets, which are cut nearly to midrib into triangular lobes. Flowers are white, about like those of Spirea, but borne in large, flat clusters 10 or 12 inches broad. Blooms in early summer. Wood is very heavy, dense and hard. Perfectly hardy and apparently will thrive anywhere under ordinary California conditions. There are but two well-developed specimens, so far as we know, in Northern California. One is in our specimen ground and the other on the campus of the University of California at Berkeley. The latter is 20 years old and over 50 feet tall.

MAGNOLIA

M. grandiflora. Southern U. S. (T) 50 ft. Well-known tree of splendid appearance. Growth slow but erect and usually symmetrical. Leaves very large, leathery, deep, glossy green. Flowers as much as ten inches broad, pure white, with a powerful aromatic and spicy fragrance. Hardy, long-lived, free from disease and desirable in every way.

M. grandiflora lanceolata (M. exoniensis). The hardiest of the varieties of Magnolia grandiflora, succeeding well as far north as Portland, where the more tender sorts would entirely fail. Leaves flattened, narrower and lighter green, rusty undereath. Unlike most of the other varieties, which do not bloom until comparatively large, this magnificent sort will produce large, fragrant, semidouble, white flowers when only a few feet high. In other points it resembles the type.

M. grandiflora galissoniensis. Another hardy variety. Leaves with upper surface very dark, glossy green; under surface covered with russet brown silk. Particularly attractive for its fine foliage. Rather shy bloomer.



Lyonothamnus floribundus asplenifolius ISLAND IRONWOOD See page 32

MAHONIA

Closely related to Berberis, from which they differ in their spineless branches and pinnate leaves. Although included with Berberis in 1900 edition of Bailey, they have always been known as Mahonia by nurserymen and are put back under latter name in 1914 edition. Leaflets are large, with prickly margins. Stems mostly arise from base of plant and usually do not branch. Flowers always yellow.

M. aquifolium. OREGON GRAPE. Oregon and California. (S) 6 ft. Well-known native shrub of medium size, with dark green leaves, which become coppery purple during winter. New growth very glossy. Flowers bright yellow, in slender, erect. clustered racemes, followed by a profusion of dark blue berries.

M. fortunei. China. (S) 3 ft. A very distinct species of dwarf habit. Leaves dull green, divided into about seven long, very narrow, pointed leaflets, edged with small teeth pointing toward tips. Novel and handsome.

M. japonica (M. beali). JAPANESE MAHONIA.
(S) 8 ft. Leaves and leaflets much larger than Oregon Grape. Soft green if shaded, becoming marked with yellow and red if exposed to full sun. Flowers large, in long, erect racemes, followed by large, blue berries. Possesses decided individuality and is excellent for shaded locations.

M. pinnata (M. fascicularis). S. W. United States. (S) 5 ft. Very similar to M. aquifolium, but with finer, more prickly and slightly glaucous leaves, Grows considerably faster. New growth red and not glossy. Flowers and fruit almost identical with M. aquifolium.

MAYTENUS

M. boaria (M. chilensis). MAYTEN. Chile. (T) 30 ft. Handsome small tree of slender, graceful habit. Leaves small, finely serrated, rather dark green. Flowers small and greenish. Fruit scarlet.

MELALEUCA

Shrubs of quick growth. Flowers mostly formed like the Callistemons, but usually on a smaller scale. Will stand wet soils, but seem to thrive well where very dry. Natives of Australia.

M. armillaris. (S) 15 ft. Large shrub of spreading habit, with long, slender, drooping branches, well clothed with small, narrow, soft green leaves. Flowers like a diminutive Bottle Brush, creamy white. Growth very rapid.

M. decussata. (S) 15 ft. Tall shrub with arching branches; very small, opposite, grayish leaves. Flowers lilac, on short spikes. Very graceful.

M. hypericifolia. Shrub of spreading growth. Leaves opposite, slender and rather long for the genus. Flowers large, with long stamens, fine red.

M. incana. (S) 12 ft. Rather tall shrub with very slender, drooping branches. Leaves very small and downy when young. Flowers white, in small "brushes" at ends of shoots.

M. nesophila. (S or T) 10-30 ft. Rather strong and quick-growing shrub, which sometimes even makes a tree. Leaves about like Leptospermum laevigatum. Flowers rosy pink, in terminal, rounded heads—not formed like the "Bottle Brushes." Free flowering.

M. wilsoni. (S) 12 ft. Fine, erect-growing shrub with medium-sized, lance-shaped leaves. Foliage soft and pleasing; branches slightly downy. New growths ruddy, making a beautiful contrast.

MICHELIA

M. fuscata (Magnolia fuscata). BANANA SHRUB, China, (S) 12 ft. A rare and handsome shrub closely related to the Magnolias. Grows slowly. Leaves dark green and glossy. Twigs covered with brown, velvety down. The flowers are light yellow, edged ruddy brown and formed like a miniature Magnolia, with a strong banana fragrance. Blooms during spring and summer. Highly prized for its fragrance, beauty and rarity.

MYOPORUM

M. laetum. New Zealand. (S) 20 ft. Large shrub of rather quick growth. Leaves large, ole-ander-shaped, very glossy above and conspicuously dotted. Flowers small, white, spotted brown, followed by an abundance of pink berries. Excellent for planting close to sea shore.



Myrtus communis variegata Variegated Myrtle See page 34

MYRTUS: Myrtle

Handsome shrubs with rather small, very aromatic leaves. Flowers are small and white, with very numerous stamens and followed by berries.

M. communis. COMMON MYRTLE. Europe. (S) 10 ft. A beautiful shrub with fine, clean, glossy foliage. Leaves about an inch long. Flowers spicy, fragrant, pure white. Handsome as a specimen or hedge plant.

M. communis flore pleno. DOUBLE-FLOWER-ING MYRTLE. Flowers very double, with few or no stamens.

M. communis microphylla. SMALL - LEAVED MYRTLE. (S) 3 ft. Leaves very small. Growth spreading but compact.

M. communis thymifolia. THYME-LEAVED MYRTLE. (S) 5 ft. Leaves very similar to preceding, but growth is more erect.

M. communis variegata. VARIEGATED MYRTLE. Foliage handsomely variegated. Very free flowering and fruiting.

M. luma (Eugenia apiculata). LUMA. Chile. (S) 6 ft. Attractive shrub of compact growth. Leaves small, smooth, rounded or oval, tipped with a small point; very dark green. The contrast between the dark foliage and numerous white flowers is very fine. One of the very best hedge plants, as it can be kept trimmed to any desired form. Almost as compact as Box and, of course, of far faster growth.

M. ugni (Eugenia ugni). CHILEAN GUAVA. (S) 4 ft. Rather small shrub of slow growth. Leaves small, light green. Bears edible fruit resembling Guavas, but much smaller, with a very agreeable taste and aroma.

NANDINA

N. domestica. Japan. (S) 6 ft. A very handsome shrub of moderate size and rather slow growth. The leaves are much divided, with rather large leaflets, light green in summer, turning to a vivid red during the fall and winter. The white flowers are small, in good-sized, erect panicles, followed by bright crimson berries. This is one of our handsomest shrubs, the winter appearance with the bright red berries and darker red foliage being particularly striking.

NERIUM: Oleander

N. oleander. Orient. (S) 15 ft. The general characteristics of this species are too well known to need description, but most people seem to overlook the fact that there are many named varieties, ranging in color through various shades of red, pink, white and yellow, which are very fine. They do best when planted in the full sun. It should not be forgotten that all parts of the Oleander are poisonous if eaten. We grow the following varieties:

Double Pink. The common variety with bright, double, pink flowers. Intensely fragrant.

Single White. Buds creamy yellow, flowers single, white. Faintly fragrant. Excellent bloomer.

Variegated. Leaves strongly marked with white, changing to creamy yellow. Flowers single, reddish purple.

Claude Blanc. Flowers single, with inner cup long, fringed and uneven; large, vivid scarlet. Profuse bloomer. Not fragrant. One of the showlest for hedges.

De Brun. Single, buff, shaded salmon. Not fragrant. Good bloomer.

Dr. Golfin. Single, bright cerise, faintly fragrant.



Pimelca ferruginea See page 35 Background—Ampelopsis tricuspidata. Boston Ivy See page 61

Henry Mares. Double, light pink shaded carmine outside. Very fragrant. A profuse bloomer. Very fine.

Lilacinum. Single, carmine in bud, shell pink when open. Not fragrant.

Mad. Chas. Baltet. Semi-double, blush pink, shaded carmine. Not fragrant.

Mad. Du Bois. Single, purest white. Faintly

Mad. Du Bois. Single fragrant. Free bloomer.

Mad. Peyre. Semi-double, light yellow fading to cream. Not fragrant.

Mad. Sahut. Semi-double, rosy carmine.

Madonna Grandiflorum. Semi-double, very large and fragrant, pure white.

Notaire Cavalliere. Single, brilliant red, not

Prof. Durand. Semi-double, clear yellow. Not fragrant. Very free bloomer. Very handsome.

Prof. Martin. Single. Quite similar to Claude Blanc, but has slightly smaller and darker red flowers. Inner cup short, fringed and even. Splendid bloomer.

OSMANTHUS

O. aquifolium. Shrub of rather spreading growth. Leaves large, coarsely serrated, dark, glossy green. Flowers small, white and fragrant. Foliage particularly handsome.

O. aquifolium ilicifolius. HOLLY-LEAVED OS-MANTHUS. Japan. (S) 10 ft. Shrub of rather erect and compact growth. Variety of preceding, but entirely distinct. Leaves are smaller, dark, shining green and usually prickly margined; sufficiently similar to Holly to cause many to believe it of that genus. Has small, white, fragrant flowers like Olive. The following two sorts are forms of this:

O. aquifolium ilicifolius argenteus. Leaves variegated with white.

aquifolium ilicifolius aureus. Leaves variegated with yellow.

O. fragrans (Olea fragrans). SWEET OLIVE. Asia. (S) 15 ft. Large shrub with glossy, leathery, broad leaves. Flowers, borne in clusters, are very small and wonderfully fragrant. There are two forms, identical except that one has white, the other yellow flowers. We grow both.

PARKINSONIA

P. aculeata. JERUSALEM THORN. Probably American. (T) 15 ft. Rare and interesting small tree. Bark is bright green, even on old wood. Leaves doubly pinnate; the pinnae from six to eighteen inches long, with numerous, very small leaflets. Small thorns on leafstalks. Flowers, resembling those of Cassia, are yellow, fragrant and borne freely in racemes. Will thrive in the driest soil and is moderately hardy soil and is moderately hardy.

PAVONIA

P. hastata. Shrub or small tree of erect growth. Branches very slender. Leaves about two inches long, coarsely serrate, spearhead shaped; very dark green above, light and slightly downy beneath. Flowers of medium size, formed somewhat like those of Abutilon, purplish pink. Blooms quite freely about twice a year. Very rare.

PERSEA

P. indica. Azores Islands. (T) 40 ft. Handsome, round-headed tree with large leaves, about like those of English Laurel. Flowers small, white, followed by dark purple berries.

PHILLYREA

P. latifolia. Europe; Africa. Large shrub of rapid growth, related to the Olive and having similar flowers. Branches stout. Leaves slightly serrated, almost as broad as long, dark green and lying close against branches. Will thrive well even in dry and exposed situations. Native of the Mediterranean region.



Prunus ilicifolia CALIFORNIA EVERGREEN CHERRY See page 37

PHOTINIA

Tall-growing shrubs with large leaves and small, white flowers in large clusters, followed by showy

P. arbutifolia (Heteromeles arbutifolia). TOYON; CHRISTMAS BERRY; CALIFORNIA HOLLY. Califorina. (S) 25 ft. Our well-known native shrub, the glory of our hills and canyons in early winter when loaded with its brilliant red berries. Thrives admirably under cultivation and with good care grows very quickly.

care grows very quickly.

P. serrulata. China. (S) 20 ft. Large shrub of rounded form. Leaves are drooping, six or seven inches long and two or three broad, very dark green and very glossy on upper surface, some turning vivid red in fall and holding on through the winter. Bears in great profusion small, white flowers in large, convex heads from six to twelve inches broad. Is in bloom most of the year except during summer. Perfectly hardy and seems to have no diseases or enemies. A thoroughly fine shrub.

PIMELEA

P. ferruginea (P. decussata). Australia. (S) 3 ft. Much-branched little shrub with small, decussate leaves closely surrounding the branches. Flowers beautiful rosy pink, crowded in heads at ends of shoots. Very handsome and free blooming. Easily one of our very finest small shrubs.

PISTACIA

P. lentiscus. MASTICH TREE. South Europe. 20 ft. Small tree of compact growth. Leaves pinnate with 8 or 10 small, dark green, leathery leaflets. A most remarkable feature of the tree is the blood red color of the leafstalks and bark of new growth. It also bears small, deep red berries.

PITTOSPORUM

Shrubs or trees mostly natives of Australia and New Zealand. In several species the flowers, while small, are handsome. The species P. eugenioides, nigricans and undulatum are highly valued as hedge plants. All thrive well in California

P. crassifolium. (S) 30 ft. Large or small tree. Leaves colored same as Olive, dark green above, silvery beneath, but are two to three inches long and very downy. Flowers wine-colored. Very valuable on account of its great resistance to wind, even close to the coast.

P. eugenioides. (S or T) 40 ft. If grown singly will make quite a good-sized, handsome tree, but more often used in hedges. Leaves are bright yel-iewish green, medium-sized in hedges, but rather large in the tree form; margins wavy. Flowers clustered, yellow and fragrant.

P. heterophyllum. China. (S) 8 ft. Small shrub with drooping branches. As name indicates, the leaves are variable, but are usually small, ovate and smooth, with very short stalks. Flowers are small and light yellow. Being very drought resistant, it does well on dry banks.

P. phillyraeoides. NARROW-LEAVED PITTO-SPORUM. (T or S) 30 ft. A very remarkable tree with slender, drooping branches, giving it almost the exact habit of the Weeping Willow. Leaves are long and very narrow, only about one-fourth inch broad. Flowers small, yellow and fragrant. Thoroughly adapted to the dryest situations. Rare at present, but should become popular.

P. tenuifolium (P. nigricans). (S or T) 40 ft. Growth about the same as P. eugenioides, whether as a specimen or in hedges. Leaves smaller and darker green. Particularly remarkable for its black flowers.

P. tobira. JAPANESE PITTOSPORUM. (S) 10 ft. Forms a dense, globular shrub of good size or can even be trained into a small tree. Leaves dark green above, lighter beneath, broadest toward the end. Flowers numerous, pure white and fragrant. Very showy in bloom, as the flowers are larger than those of the other species and borne at the ends of the shoots.

P. tobira variegatum. Identical with preceding except that foliage is strongly and conspicuously variegated with white. One of the very handsomest shrubs in our collection.

P. undulatum. VICTORIAN BOX. 40 ft. Makes a handsome, round-headed tree, or can be trained as a hedge. Leaves rich green, longer than any of above, wavy-margined and taper-pointed. Flowers yellowish white, extremely fragrant, particularly at night. Makes a beautiful, free-flowering tree and is one of the very handsomest hedge plants for sections where it is sufficiently hardy.

POLYGALA

Free-blooming shrubs with flowers curiously resembling those of the pea, but entirely unrelated

P. brachypoda. (S) 5 ft. Growth very erect. Branches green and very straight. Leaves long and very narrow. Flowers numerous, reddish purple.

P. dalmaisiana. Garden hybrid. (S) 6 ft. One of the most continuous blooming shrubs in our collection, as it is never without flowers and most of the time is nearly covered. Forms a dense, globular shrub of moderate growth, with very slender branches. Flowers magenta-pink, tipped with a little white brush.

P. virgata speciosa. S. Africa. (S) 5 ft. Growth and flowers almost same as P. brachypoda, but blooms later in the season. Leaves slightly smaller.



Pyracantha coccinca. Evergreen Hawthorn; Burning Bush See page 37



Spartium junceum. Spanish Broom See page 39

PRUNUS

A very large and greatly diversified genus, including many of our commonest fruit trees such as plum, cherry, peach, apricot, etc., and also many very valuable ornamental trees and shrubs. The evergreen kinds described below include our native wild cherries and the Cherry Laurels, all characterized by and desirable for their fine foliage.

P. ilicifolia. CALIFORNIA EVERGREEN CHERRY; HOLLY-LEAVED CHERRY; ISLAY. (T or S) 25 ft. Well-known native shrub or tree with very glossy, prickly margined leaves, resembling those of English Holly. One of the very handsomest hedge plants, but of rather slow growth.

P. ilicifolia integrifolia. CATALINA CHERRY. (T) 30 ft. A variety of the preceding with considerably larger and more pointed leaves, usually without the prickly edges. Grows more rapidly.

P. laurocerasus. ENGLISH LAUREL: CHERRY LAUREL. S. Europe. (S) 15 ft. Large shrub or even small tree, with broad, heavy, glossy leaves, slightly serrated. Flowers are white, in erect racemes, followed by black, cherry-like fruits. There are several varieties, which differ in the shape and color of leaves.

P. laurocerasus camelliaefolia. CAMELLIA-LEAVED LAUREL. Leaves long and narrow, recurved both edgewise and lengthwise.

P. laurocerasus latifolia. LARGE - LEAVED LAUREL. Identical with type, except has noticeably broader, larger and darker green leaves.

P. laurocerasus rotundifolia. Leaves light green, oblong and blunt. Growth compact and symmetrical.

P. lusitanica. PORTUGAL LAUREL. Spain and Portugal. (S) 20 ft. Easily distinguished by its somber, very dark green, sharply serrated leaves, which usually show a tendency to fold upward from

the midrib. Growth compact. Flowers white, in very long, slender racemes. Easily one of the handsomest evergreen shrubs and excellent for tub culture.

PSIDIUM: Guava

Although often grown primarily for their fruit, the Guavas are certainly entitled to high rank as ornamental subjects on account of their clean, glossy foliage, good habit, abundant flowers and showy as well as edible fruit.

P. cattleianum. STRAWBERRY GUAVA. Brazil. (S) 15 ft. Handsome, compact shrub. Leaves dark green, leathery and glossy. Flowers cream colored. Fruit deep claret with very fine flavor. Often grown as a loose, tall hedge.

P. friedrichsthalianum. Costa Rica. (T) 30 ft. Large shrub or small tree of rather vigorous, spreading growth. Leaves longer than preceding and so regularly arranged on the side branches as to give the appearance of large pinnate leaves. Said to bear small, pear-shaped, edible fruit, but at this writing has not been tried out in California.

PYRACANTHA (Crataegus): Evergreen Hawthorn

Large shrubs identical in flower and fruit with Hawthorns, but are evergreen. All bear a profusion of showy berries.

P. coccinea. BURNING BUSH. Europe. (S) 15 ft. Large, thorny shrub with small, ovate leaves. Bears a great profusion of small white flowers in flat corymbs, followed by a mass of orange red berries in early fall.

P. coccinea lalandi. (S) 20 ft. Variety of stronger growth, making long shoots that can be trained against a wall if desired. Leaves a little longer. Berries orange yellow. There is not a very marked difference between this variety and the type.

PYRACANTHA (Crataegus): Evergreen Hawthorn-Cont'd

PYRACANTHA (Crataegus): Evergreen Hawthorn—Cont'd P. crenulata. CHINESE EVERGREEN HAWTHORN. (S) 10 ft. Very distinct from the preceding sorts. Growth is more compact, branches slender, leaves longer, narrow and glossy. New growth very ruddy. Flowers about the same, but berries clear, bright red. It is about the carliest red-berry-bearing shrub, as color is fully developed by August. Will endure considerable shade. As yet this is comparatively scarce, but is rapidly attaining great nopularity attaining great popularity.

QUERCUS: Oak

Well-known acorn-bearing trees. The three Japanese species described are quite distinct from the ordinary run of Oaks and could hardly be identified as such except by their bearing acorns.

Q. acuta. Japan. (S or T.) Growth shrubby. Leaves entire, rather large, pointed, dark green above, light green below.

Q. agrifolia. CALIFORNIA LIVE OAK. (T) 50 ft. The well-known grand old California evergreen, which adds so much beauty to our lowland scenery, where it abounds and grows to perfection. Many refuse to plant this on account of its supposed slow growth. This impression is entirely erroneous, as with care and water it grows very rapidly, and quickly forms a fine tree.

Q. cuspidata. Japan. (T) 50 ft. Growth wide-spreading, but the branches slender; forms large tree. Leaves quite small, with long, tapering point; light green, entire or slightly serrate toward tips.

Q. glauca. Japan. (T) 40 ft. Growth upright. Leaves usually larger than the preceding, partly serrate; duil green above, glaucous and silky be-neath. Very handsome.

Q. "Holly-leaved." (7) 40 ft. Probably a form f Q. ilex. Leaves very similar to Holly. Makes fine medium-sized tree with rounded head and handsome foliage



Veronica speciosa imperialis IMPERIAL VERONICA See page 39

Q. ilex. ILEX; HOLLY OAK. S. Europe. 60 ft. Fine, round-headed tree with small, variable leaves, usually prickly. Freely used along the Riviera for tall, formal hedges. Excellent for this purpose, as it stands trimming well.

Q. suber. CORK OAK. S. Europe; N. Africa. (T) 50 ft. Growth upright but with drooping branches. Leaves like Live Oak, distinguished by the downy lower surface. From the bark of this tree is derived the cork of commerce.

RAPHIOLEPIS

R. japonica (R. ovata). Japan. (S) 8 ft. Handsome, compact shrub of low and rather slow growth. Branches stout. Leaves of medium size, oval or rounded, leathery, very dark but lustrous green. Flowers white and fragrant, in early spring, followed by dark blue berries in clusters during winter.

RHAMNUS

R. purshiana californica. CASCARA; CALIFORNIA WILD COFFEE. Pacific Coast. (S) 10 ft. Handsome and hardy native shrub. Leaves green, oblong, glossy, aromatic when crushed. Flowers greenish. Berries shaped like those of coffee, red turning black. Thrives well in shade.

R. purshiana tomentella. Variety of preceding with very downy, gray leaves. Otherwise similar.

RHODODENDRON

Well-known, popular and very handsome flow-ering shrubs. The flowers are large individually and collected into large heads at the ends of the branches, surrounded by a whorl of leaves. Colors cover a wide range, mainly through shades of red and purple, some almost white. Will not succeed in the full sun; prefer partial or complete shade and moist soil. The grafted varieties are hybrids of various species.

ROSMARINUS: Rosemary

R. officinalis. Mediterranean region. (S) 6 ft. Small shrub of irregular growth. Leaves linear and highly aromatic, as are the numerous lavender-colored flowers borne in early spring. Thrives in

RUSCUS

R. aculeatus. BUTCHER'S BROOM. Europe. (S) 4 ft. Small, compact shrub of very peculiar appearance; branches and spiny false leaves one uniform shade of dull green. Flowers are small and inconspicuous, but are followed by large, red berries, which contrast handsomely with the green shorts. Very add little about. plants. Very odd little shrub.

SCHINUS: Pepper Tree

Of the following two species the first is known everywhere in the State except the coldest sections, but the second is quite uncommon.

S. molle. CALIFORNIA PEPPER TREE. Peru. (T) 40 ft. Californians need no description of this old favorite. Round-headed tree with low, drooping branches. Leaves pinnate with acute leaflets. Foliage very pungent-aromatic. Flowers very small but very numerous, greenish white, very attrative to bees. Berries rosy red, in long, drooping clusters during the winter. It should be noted that each individual tree bears only male or female blossoms, and, of course, only the latter are followed by berries. Introduced into California from Mexico in early days. in early days.

S. terebinthifolius. BRAZILIAN PEPPER TREE. Brazil. (T) 40 ft. Of rapid, spreading growth. Leaves are pinnate, but with much larger leaflets than the preceding, strongly aromatic. New growth usually strongly tinged pink. Handsome, but not as resistant to frost as the above species.

SOPHORA

S. tetraptera microphylla (Edwardsia macnabiana). New Zealand. (S) 10 ft. Shrub of spreading growth with very slender branches. Leaves pinnate with numerous very small, rounded leaflets. Flowers rather large, yellow, pea-shaped, borne in drooping racemes.

SPARTIUM: Broom

S. junceum. SPANISH BROOM. Mediterranean region. (S) 12 ft. Well-known large shrub. Usually assumes a globular form without pruning. Branchlets are cylindrical, hollow, clear green and almost devoid of leaves. Flowers large, bright yellow and fragrant. Covered with flowers most of the time. Very resistant to drought, thriving even on dry hillsides. One of our most useful flowering shrubs.

STATICE: Sea Lavender

S. arborescens. Canary Islands. (S) 5 ft. Odd-looking shrub with stout, erect stems and very large leaves. Flowers, borne in very large clusters on stout, erect stalks, are small, white and soon fall, but are surrounded by a showy blue "everlasting" calyx, which lasts indefinitely, even if cut

STERCULIA (Brachychiton)

The following are both Australian trees with clean, glossy foliage, which is mainly renewed The trunks are very large at base and taper rapidly.

- S. acerifolia. FLAME TREE. Australia. (T) 60 ft. Large tree of slow growth when young. Leaves large and deeply lobed, somewhat resembling Maple. Flowers brilliant scarlet, borne in summer. Rather Australia. (T) 60 nen young. Leaves
- S. diversifolia. BOTTLE TREE. Australia. (T) 40 ft. Tall tree with moderate-sized, clean, glossy leaves, deeply and variously lobed. Flowers small, greenish white, marked with red. Remarkable for the great size of trunk at the base. An excelent specimen and first class as an evergreen street tree.

SUTHERLANDIA

S. frutescens. BLADDER SENNA. S. Africa. (S) 6 ft. Shrub with pinnate leaves and very small leaflets, bearing numerous red, pea-shaped flowers in racemes, followed by curious bladder-like seed nods.

SYZYGIUM

SYLVIGIUM

S. operculatum. Himalaya region. A recent introduction said to be a large tree native of the lower slopes of the Himalayas, bearing astringent fruit as large as a good-sized Damson. Our young plants have splendid foliage. Leaves are opposite, about eight inches long by two inches broad, with shape, color and texture much like those of the Rubber Plant, though more pointed at both ends. They are glossy and dark green when fully developed, but quite ruddy when young. If it thrives well here, it should prove a magnificent addition to the list of broad-leaved evergreen trees.

TEMPLETONIA

T. retusa. Australia. (S) 6 ft. Rare shrub with dark green leaves of unusual form, notched at tip. Bears elongated, remotely pea-shaped flowers of peculiar form, coral red.

TRISTANIA

T. conferta. BRISBANE BOX. Australia. (T) 100 ft. Handsome evergreen shade tree. Leaves shaped like those of orange, but larger, perfectly smooth and not serrated, dull green above, light green beneath, clustered at ends of branches. Flowers white, star-shaped, strongly fringed by the finely branched columns of stamens, giving them a most unusual appearance. Makes a good-sized tree. Very resistant to drought. Rare.

UMBELLULARIA

U. californica. CALIFORNIA LAUREL or BAY. Our well-known large native tree with dark green, strongly aromatic leaves and yellow flowers. We consider this one of the handsomest trees in cultivation and believe it should be widely planted.

VERONICA

Shrubs of moderate and usually quite compact growth. Flowers in spikes. Excellent for shady places, but will thrive perfectly in full sun. The following species are natives of New Zealand:

V. decussata. (S) 3 ft. Rather dwarf. Leaves medium sized and closely set. Flowers large, violet blue. An excellent hedge plant.

V. decussata variegata. A new variety originating with us. Foliage brilliantly and freely variegated with bright yellow. Very handsome.

V. elliptica. (S) 5 ft. Growth upright. Leaves small, light green. Flowers large, in loose spikes, violet tinted in bud, changing to pure white.

V. speciosa andersoni. Hybrid. (S) 6 ft. Growth strong and leaves rather long. Flowers violet purple. Very free bloomer.

V. speciosa imperialis. IMPERIAL VERONICA.
(S) 6 ft. Growth strong and rather spreading

V. speciosa imperialis. IMPERIAL VERONICA. (S) 6 ft. Growth strong and rather spreading. Leaves large, dark green with purple margins and midribs. Flowers amaranth red. Very handsome. V. speciosa variegata. (S) 6 ft. Growth strong and upright. Leaves large and conspicuously variegated with creamy white. Flowers light blue. V. traversi. (S) 3 ft. Small shrub of upright, compact growth. Leaves far smaller than in any of preceding. Flowers pure white, in great profusion. Spikes small. Very dainty.

VIBURNUM

The evergreen Viburnums are hardy and handsome plants with good foliage. Flowers small in showy clusters. The forms known as Laurustinus are among our most widely used shrubs.

V. odoratissimum. China. (S) 10 ft. Bushy shrub with stout, erect branches. Leaves large and leathery, glossy green, dark above, pale beneath. Flowers white, very fragrant, borne in large panicles, sometimes followed by showy red berries. During winter the exposed leaves turn a vivid red. Very rare and handsome shrub.

V. sandankwa (V. ellipticum). Growth spreading. Leaves elliptic, large, dark green and quite wrinkled; edges finely scalloped. Flowers cream color, in small clusters, very fragrant.

LAURUSTINUS. Mediterranean rev. tinus. LAURUSTINUS. Mediterranean region. (S) 10 ft. Shrub with rather small, wavy-margined, pointed leaves. Flowers in broad heads, pinkish in the bud, white when fully opened. A great hedge plant.

V. tinus lucidum (Laurustinus grandiflora). Much better than the type. Growth is stronger, leaves larger and very glossy, with flower clusters several times as large. Very fine.

V. tinus strictum (Laurustinus rotundifolia). Variety of very tall, slender and erect growth. Leaves slightly rounded. Blooms freely. Flower clusters

V. tinus variegatum. Leaves very conspicuously marked with yellow. Otherwise same as type.

VITEX

V. agnus-castus. CHASTE TREE. Europe. (S or T.) Small tree with palmate leaves; leaflets five to seven, light green above, whitish beneath. Foliage very aromatic. Flowers pale lilac, in clusters or racemes. Very handsome.

WIGANDIA

W. macrophylla. LARGE-LEAVED WIGANDIA. Mexico. (S or T) 15 ft. Large shrub or small tree with enormous hairy leaves, sometimes three feet long. Flowers large, violet-colored, borne in loose spikes. Very showy and tropical looking, but will not endure much frost.

DECIDUOUS ORNAMENTAL TREES

HIS division is self-explained by the title, except that trees of drooping or "weeping" habit are classed together in the next section.

The best street trees for this part of California are included in this division. Evergreens are used in Southern California, but in Northern California deciduous trees are better, as they afford needed shade during the summer, but admit sunshine in winter, which helps to dry the mud after rains. A list of the best trees for this purpose, both evergreen and deciduous, will be found in back of catalogue.

In this class will also be found some of the most beautiful specimen trees, others valued for their wealth of blossoms and some "general purpose" trees.

All have been carefully grown, and such as needed it pruned each year. It is advisable, however, when planting, to cut back pretty well all but a few kinds. This helps the tree to become established and lessens the risk of loss. It is easy to cut back too little, but hard to overdo it.

In the hot interior valleys it is advisable to shade the trunks of this class of trees until they become well established. A board on the south side will serve the purpose.

See back of catalogue for further instructions.

ACER: Maple

Among our most ornamental and valuable deciduous trees for park and street planting. The foliage of nearly all assumes handsome autunmal tints. All have leaves with the characteristic lobes except the Box Elder, which has pinnate leaves. For Japanese Maples see Deciduous Shrubs.

A. campestre. ENGLISH CORK-BARKED MA-PLE. Europe. 30 ft. Beautiful small tree of compact habit. Leaves very small compared to other Maples, dark green. Bark somewhat corky. Certain to attain popularity when better known.

A. macrophyllum. OREGON or LARGE-LEAVED MAPLE. Oregon; California. 100 ft. A native tree of large size. Young branches rather stout, bluish and glaucous. Leaves very large, dark green and deeply lobed. Not easy to transplant.

A. negundo californicum. CALIFORNIA BOX ELDER. 60 ft. Native variety of Eastern Box Elder. Pinnate leaves, usually of five leaflets, Young branches light green. Particularly handsome when in bloom.

A. platanoides. NORWAY MAPLE. Europe; Asia. 100 ft. A large, handsome tree of rounded form, with very broad, five-lobed, dark green, shining leaves. One of the most desirable for any situation

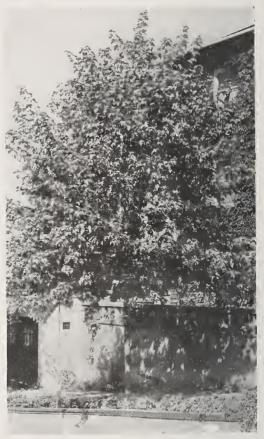
A. platancides schwedleri. SCHWEDLER'S PUR-PLE-LEAVED MAPLE. Variety of Norway Maple. Young leaves are deep purple. As summer advances, the purple changes to green. Very handsome.

A. pseudo-platanus. SYCAMORE MAPLE. Europe; Asia. 70 ft. A handsome tree of rapid, upright growth, with smooth, ash-gray bark. Leaves are large, five-lobed, deep green above, glaucous beneath.

A. rubrum. SCARLET MAPLE. Eastern N. America. A medium, round-headed tree of slow growth here. Produces deep red blossoms, appearing before the leaves, which change to a brilliant scarlet in early autumn.

A. saccharinum (A. dasycarpum). SILVER MA-PLE: SOFT MAPLE. Eastern N. America. 120 ft. Large tree of very quick growth. Bark nearly white. Leaves are deeply lobed and very variable in form, green above and silvery beneath.

A. saccharum. SUGAR MAPLE; ROCK MAPLE. Eastern N. America. 120 ft. A well-known tree of



Acer saccharinum. SILVER MAPLE

stately growth, fine form and foliage, which assumes beautiful autumnal tints in cold sections. Leaves rather small, three or five lobed.

AESCULUS: Buckeye, Horse Chestnut

Handsome flowering trees with palmate leaves and large leaflets. Flowers borne in showy, erect panicles.

Ae. californica. CALIFORNIA BUCKEYE. 30 ft. Handsome native tree or large shrub. Usually very symmetrical and round-headed. Leaves deep green; panicles long and slender. Pods smooth.

Ae. carnea. RED-FLOWERING HORSE CHEST-NUT. 40 ft. A rare and beautiful tree of slow growth. Leaves smaller and deeper green than the following. Flowers red and very showy. Pods smooth. smooth

Ae. hippocastanum. EUROPEAN HORSE CHESTNUT. 80 ft. Sturdy tree of strong growth. Flowers white tinged with red. Pods spiny. Succeeds well in California and worthy of more extensive planting.

ALBIZZIA

A. Julibrissin (Acacia julibrissin). CONSTANTI-NOPLE ACACIA. Asia; Africa. 40 ft. Of low and widely spreading growth; very hardy. Leaves very large, bipinate, finely divided and feathery. Flow-ers borne profusely during summer, in heads, varying from pink to white.

BETULA: Birch

Trees of vigorous and upright growth, but with slender, usually drooping shoots. Leaves rather small. Will thrive even in poor soils.

- B. alba. EUROPEAN WHITE BIRCH. Europe to Japan. 80 ft. Medium to large tree with white bark on the older limbs and trunk. Growth somewhat irregular. At about five years the young branches assume a drooping habit. (See also Cut-Leaved Weeping Birch under Deciduous Weeping
- B. alba fastigiata. UPRIGHT BIRCH. Of el pyramidal habit like the Lombardy Poplar. silvery white. Very distinct and ornamental.
- B. lenta. SWEET or CHERRY BIRCH. 60 ft. Very handsome, round-headed tree. Trunk dark, reddish brown. Bark on young shoots has aroma and taste of wintergreen.
- B. papyrifera. CANOE BIRCH; PAPER BIRCH. Northern U. S. 100 ft. Bark on trunk and older limbs becomes paper-white similar to European Birch. The cordate leaves are very much larger and darker; dull green above. Veins on lower surface are fleshy and covered with rusty down. Very distinct. Pauls used by Leding for medicing covered. distinct. Bark used by Indians for making canoes.
- B. populifolia. AMERICAN WHITE BIRCH. Eastern U. S. and Canada. 40 ft. Very similar to B. alba. Leaves a little narrower, lighter green. Makes a smaller tree with same white bark.

CARPINUS: Hornbeam

Bushv trees of slow, compact growth, with general appearance like that of the Beeches.

C. betulus. EUROPEAN HORNBEAM. Europe to Persia. 70 ft. Forms larger tree than the following. Very valuable for tall hedges. Leaves after turning brown in the fall have the peculiar habit of remaining on the tree all winter.

C. caroliniana. AMERICAN HORNBEAM. 40 ft. Rather small tree. Foliage dark bluish green, turning yellow or red in fall.

CASTANEA: Chestnut

While also grown for its edible nuts, the chestnut is easily one of the handsomest deciduous ornamental trees. Leaves large and long, with spiny margins.

C. sativa. ITALIAN or SPANISH CHESTNUT. Makes a fine, round-headed tree of great beauty. Flowers, in very long, slender spikes, are produced very profusely in spring.
C. sativa variegata. VARIEGATED CHESTNUT, Identical with type except that leaves are brilliantly variegated with creamy white.

CATALPA

Trees noticeable for their large, heart-shaped leaves. Flowers are tubular, much like a Bignonia, light colored and borne in large clusters.

- C. bignonioides. S. E. United States. 50 ft. Resembles C. speciosa, but slower grower and makes a smaller tree with smaller foliage, but more conspicuous and numerous flowers.
- spicuous and numerous flowers.

 C. speciosa. HARDY CATALPA. Eastern United States. 160 ft. Very rapid-growing, tall tree with large, heart-shaped leaves, sometimes a foot long. A free bloomer, bearing panieles of white, fragrant flowers in June and July. Yields valuable timber.



Betula alba. European White Birch

CEDRELA

trees with feathery foliage similar to Ailanthus, but without its disagreeable odor. Flowers white, in long, drooping racemes, two to three feet in length. Very fine as an avenue tree.

CELTIS: Nettle Tree

Trees of strong, spreading growth. Leaves resemble those of Nettles. Flowers inconspicuous, but followed by numerous small berries. Wood is very fine grained, light and elastic, useful for manufacture of small articles.

C. australis. Mediterranean region. 60 ft, Healthy, vigorous tree; succeeds almost anywhere. Leaves three to five inches long, like Elm. Berries dark purple.

CELTIS: Nettle Tree-Continued

C. occidentalis. AMERICAN NETTLE TREE or HACKBERRY. 120 ft. Makes larger tree than above, with smaller foliage. Branches numerous and spread horizontally. Berries orange red.

CERCIS: Judas Tree

Small trees bearing innumerable small, pea-shaped flowers before leaves appear. Pods remain all summer, adding to picturesque appearance.

C. siliquastrum. EUROPEAN JUDAS TREE. 40 ft. Very beautiful in spring when covered with a mass of purplish rose flowers.

a mass of purpose tose nowers.

C. siliquastrum alba. WHITE-FLOWERING
JUDAS TREE. 30 ft. Variety of preceding with pure white flowers.

CLADRASTIS

C. tinctoria (Virgilia lutea). YELLOW WOOD. S. E. United States. 50 ft. A fine tree with compact, broadly rounded head; leaves pinnate, light; pleasing green. Flowers like pea blossoms, white and fragrant, borne very profusely in long racemes in June

CRATAEGUS: Thorn: Hawthorn

Among the most showy of the smaller deciduous trees. They bloom freely in spring and most kinds bear highly ornamental berries in fall.

C. cordata. WASHINGTON THORN. Eastern United States. 30 ft. Easily one of our handsomest small trees. Leaves are triangular, lobed, deep glossy green, holding their color until very late in the fall, when they assume beautiful red and yellow tints. Flowers are white and borne late in spring, followed by large clusters of small, glossy, intensely red berries.

C. crus-galli. COCKSPUR. Eastern United States. 40 ft. Small, thorny tree, but very decorative. Bloom handsome. Fruit showy red, remaining on tree most of the winter.

C. monogyna pauli. PAUL'S DOUBLE SCAR-LET THORN. Small tree, but larger than the others and of very erect, quick growth. Flowers produced in great profusion in early summer, bright carmine and double. Berries large, dull red and borne freely. Very fine.

C. monogyna stricta. PYRAMIDAL THORN. Of handsome pyramidal habit with fine foliage. A good grower. Flowers white.

C. nigra. Europe. 25 ft. Small tree with downy, lobed leaves. Flowers white, becoming slightly red. Berries black. This is not the Blackthorn, for which see Prunus spinosa in Deciduous Shrubs.

C. oxyacantha. ENGLISH HAWTHORN. Europe. 15 ft. Small tree or shrub with spreading branches and stout spines. Very fragrant, single, white flowers produced freely. Berries scarlet. The celebrated English hedge plant.

C. oxyacantha flore pleno. DOUBLE WHITE HAWTHORN. A double-flowering form of the foregoing. Flowers usually become nearly pink before falling.

C. rubra splendens. Trees of spreading habit with single, bright red flowers. Bloom is very profuse, followed by a heavy crop of red berries. Probably a variety of C. oxyacantha.

C. tomentosa. Eastern United States. 20 ft. Small tree with few or no thorns. Leaves downy. Flowers single white. Fruit is very showy, blood

DIOSPYROS: Persimmon

D. lotus. China. 40 ft. Handsome round-headed tree with dark, glossy green leaves four or five inches long. Bears very small fruit about half an inch in diameter, brown becoming black. Edible and very sweet when fully ripe.

FAGUS: Beech

Noble, long-lived trees of imposing yet graceful appearance. Bark smooth, branches spreading. The small nuts are edible.

F. sylvatica. EUROPEAN BEECH. 80 ft. A magnificent tree of rather slow growth. Branchlets and twigs very slender. Leaves often remain



Laburnum vulgare. Golden Chain See page 43

on inner part of tree through the second year after turning brown in the fall.

turning brown in the fall.

F. sylvatica heterophylla. CUT-LEAVED BEECH. A variety with deeply cut, fern-like leaves. Very graceful and handsome. Rare.

F. sylvatica purpurea. PURPLE-LEAVED BEECH; COPPER BEECH. Probably the finest of the purple-leaved trees. Growth slow and compact. Foliage glossy, at first purplish crimson, changing to deep, lustrous purple. Color retained through the season.

FRAXINUS: Ash

Trees of upright growth. Leaves pinnate. The following two species make excellent street trees.

F. americana. AMERICAN WHITE ASH. 120 ft. Tall tree of rapid growth, with straight, clean trunk and broad, rounded head.
F. excelsior. EUROPEAN ASH. Europe; Asia. 120 ft. Similar to above, leaves more divided, buds black. Foliage darker.

GINKGO: Maiden Hair Tree

G. biloba (Salisburia adiantifolia). 60 ft. One of the most remarkable trees in cultivation. Allied to the conifers and has the regular outline of a fir. Leaves are fan-shaped, clear green during summer and changing to a clear, soft yellow in the fall. Apparently extinct except in cultivation. Has been preserved from antiquity in grounds about the temples of China and Japan.

GLEDITSCHIA: Honey Locust

Large flowering trees with pinnate leaves and numerous strong, sharp thorns. The flowers are greenish and inconspicuous, followed by very large, long pods on the fertile trees. The second species will form an impassable hedge.

G. japonica. JAPANESE HONEY LOCUST.
70 ft. A smaller tree than the following with larger leaves, very finely divided. Flowering habit

G. triacanthos. COMMON HONEY LOCUST. Eastern U. S. 120 ft. Tall tree with conspicuous spines, gray bark and finely divided, feathery foliage. Pods 12 to 18 inches long.

G. triacanthos inermis. THORNLESS HONEY LOCUST. A variety with few or no thorns.

GYMNOCLADUS

G. canadensis. KENTUCKY COFFEE TREE. Eastern U. S. 75 ft. Medium-sized tree with stout, stiff and blunt limbs. Leaves bipinnate, finely divided and feathery. Bears long clusters of white flowers, followed by large, flat pods.

HICORIA: Hickory

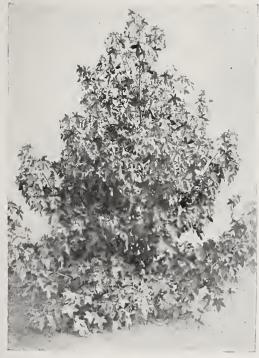
H. minima (Carya amara). SWAMP HICKORY; BITTER NUT. Eastern U. S. 100 ft. Large free with handsome, broad head. Leaves pinnate. Nuts bitter. Although the fastest growing of the Hickories, its growth is rather slow.

JUGLANS: Walnut

Well-known trees of majestic proportions. Leaves pinnate. Hardy and very long-lived.

J. californica. CALIFORNIA BLACK WALNUT. 80 ft. Our handsome, rapid-growing, native Walnut, which thrives well in any good soil. An excellent shade and avenue tree.

J. nigra. AMERICAN BLACK WALNUT. Eastern U. S. 150 ft. One of the largest and handsomest of American forest trees. It grows freely on this Cpast; stands transplanting well, bears early, and ought to be extensively cultivated, not alone for ornament, but also for its valuable wood.



Liquidambar styraciflua. Sweet Gum

J. regia laciniata. CUT-LEAVED ENGLISH WALNUT. A distinct variety, with large, deeply cut foliage and producing smooth, well-fleshed, medium-sized nuts. Makes a fine, round-headed specimen tree.

LABURNUM

L. vulgare. GOLDEN CHAIN. S. Europe. 20 ft. A beautiful small tree of rather quick growth. Leaves clover-shaped, soft, pleasing green; do not change color in fall. Flowers fragrant, bright yellow, in long, drooping racemes, suggestive of yellow Wistarias borne on a tree.

L. vulgare aureum. GOLDEN-LEAVED LA-BURNUM. A beautiful form, with foliage of such brilliant yellow that at a distance it appears like a mass of yellow bloom. Growth and flowering habit same as type.

LARIX: Larch

Among the very few deciduous conifers. Leaves are needle-like, in bundles similar to the true Cedars.

L. decidua. EUROPEAN LARCH. 100 ft. A large, handsome tree of rapid growth. Bark gray. Leaves bright green.

L. leptolepis. JAPANESE LARCH. Japan, 80 ft. A very handsome species. Branches spread horizontally, forming pyramidal head. Foliage soft bluish green. Branchlets yellow. A very handsome lawn tree.

LIQUIDAMBAR

L. styraciflua. SWEET GUM. Eastern U. S. 120 ft. Forms a large tree, but of slow growth. Branches corky. Leaves star-shaped and very similar to Maple. The autumn coloring of the foliage in this climate is most gorgeous, surpassing that of any other tree. As this tree is rather difficult to transplant, all possible care should be exercised. It should be thoroughly pruned before planting and kept well watered until established again

LIRIODENDRON

L. tulipifera. TULIP TREE. Eastern U. S. 100 ft. Stately tree of moderate growth in this climate. Leaves large, rich green, somewhat violinshaped. Flowers are handsome, cup-shaped, much resembling those of Tulip; greenish yellow, marked with orange inside. Probably will not attain maximum size in California, usually making a tree of medium proportions. medium proportions,

MAGNOLIA

M. acuminata. CUCUMBER TREE. Eastern U. S. 90 ft. Tall, symmetrical tree of pyramidal shape. Leaves entire, six to nine inches long. Flowers greenish yellow, not very conspicuous. Green fruit resembles cucumber.

M. hypoleuca. Japan. 100 ft. Large, pyramidal-headed tree. Of very striking appearance, due to its enormous undivided leaves, which are often as much as 20 inches long and 6 or 8 inches broad on young plants; soft green above, silvery white be-neath. Flowers are 6 to 7 inches across, cup-shaped, white with scarlet filaments; fragrant. A magnificent, rare and remarkable tree.

MELIA

M. azedarach umbraculiformis. TEXAS UM-BRELLA TREE. 25 ft. So well known to Californians as to require little description. Leaves finely divided; flowers lilac colored and fragrant. Good specimens form a perfect umbrella head.

MORUS: Mulberry

M. alba. WHITE MULBERRY. China, 60 ft. Tree of extremely rapid growth. Branches long and slender. Leaves rather small, lobed. Fruit elongated, white or violet. Useful for quick effect and to furnish food for birds to keep them away from more valuable fruit. One of the principal foods for the silkworm.

Lick's American and New American Mulberries, often planted for ornamental effect and bird food, will be found described in Fruit Department.

OSTRYA

O. virginica. HOP HORNBEAM; IRONWOOD. Eastern U. S. 50 ft. Small tree with long, drooping branches and foliage like Birch. Leaves turn yellow in fall. Blossoms in drooping catkins, much resembling Hops.

PAULOWNIA

P. imperialis. EMPRESS TREE. China; Japan, 50 ft. Rapid-growing tree very similar in appearance to Catalpa, but having much larger heartshaped leaves. Flowers appear early, before the leaves; are very large, trumpet-shaped, fragrant, lavender and violet colored, and borne in clusters. A very valuable ornamental tree,

PHELLODENDRON

P. amurense. CHINESE CORK TREE. China; Japan. 50 ft. Tree with corky bark; grows to a large size and makes a fine spreading specimen. Leaves like Black Walnut. Flowers are greenish white, in clusters, followed by black berries. A handsome ornamental tree; very resistant to drought.

PISTACIA: Pistachio

Trees with pinnate leaves. Usually foliage, bark and sap are strongly aromatic. All have a graceful appearance.

- P. atlantica. Canary Islands. 30 ft. Small, round-headed tree of symmetrical form. Foliage fine. Leaflets seven or nine, moderately dark green. Habit is very compact and leafy, affording good shade.
- P. chinensis. CHINESE PISTACHIO. 75 ft. Beautiful, round-headed tree of upright growth. Leaves about ten inches long with about eleven



Platanus orientalis
European Sycamore; Oriental Plane

leaflets an inch and a half long. Handsome at any time, but glorious in the fall, when the foliage becomes an intense, vivid scarlet unequaled by any other tree. Extremely rare at present, but sure to be widely planted when its adaptability to our climate and wonderful autumnal tints become better known.

P. mutica. 40 ft. Round-headed tree with stout branches. Leaflets five or seven, large, deep green. The end growth on all branches is brilliant red, appearing at a little distance like a mass of bloom. Bears an abundance of small, ruddy, berry-like nuts. in large clusters.

PLATANUS: Sycamore: Plane Tree

Large trees of noble proportions. Leaves large and lobed like those of Maple. Easily recognized by their trunks, from which the thin bark peels off in irregular flakes, leaving patches of lighter color. Splendid shade trees. All thrive well here.

- P. occidentalis. AMERICAN PLANE; BUTTON-WOOD. Eastern U. S. 150 ft. Similar to the following, but of less regular growth, with smaller, less deeply lobed leaves. Fruit heads usually borne solitary. Makes a large, tall tree.
- P. orientalis. EUROPEAN SYCAMORE; ORIENTAL PLANE. Europe and Asia. 80 ft. This splendid tree is almost perfection for street and avenue use. Without training it forms a fine, spreading, well-rounded head. Almost entirely free from disease or pests. In hot climates the trunks should be shaded when first transplanted to protect the thin bark from sunburn. Leaves are large, dark green and deeply lobed. Fruit heads from two to four on long, drooping stalks. Bark flakes off from trunk and older limbs. Everything considered, we believe this is the very best street tree for California use and do not hesitate to recommend it most thoroughly.
- P. racemosa. CALIFORNIA SYCAMORE. 100 ft. Our picturesque native tree, which adds so greatly to the beauty of our canyon scenery. Growth less regular than the others. Leaves very large and deeply lobed. A magnificent tree for situations allowing sufficient room for full development.

POPULUS: Poplar

Trees of very rapid growth. Wood soft and brittle. Leaves tremble in the faintest breeze. Among the very easiest trees to transplant and will thrive almost anywhere.

- P. alba bolleana. BOLLES' SILVER POPLAR. 80 ft. Habit similar to well-known Lombardy Poplar, but of much stronger growth. Leaves are small, lobed, dark green above, cottony and white beneath. The contrasting colors of opposite sides of leaves, which tremble in the faintest breeze, lend a remarkable picturesqueness to this beautiful tree.
- P. alba nivea. SILVER or WHITE POPLAR. 70 ft. A tree of wonderfully rapid growth and wide-spreading habit. Leaves large, glossy green above and white as snow beneath.
- P. balsamifera. BALSAM POPLAR; BALM OF GILEAD. 75 ft. Tall, large-headed tree of wonderfully rapid growth. Bark green on younger branches. Leaves dark green above, lighter beneath. Will thrive anywhere, and, at least when young, is the fastest growing tree in our entire collection.
- P. deltoides carolinensis. CAROLINA POPLAR. A very rapid-growing variety with large leaves; grows to a large size in short time. Valuable for street planting.
- P. nigra italica. LOMBARDY POPLAR. 100 ft. Widely known and esteemed for its decided individuality. Grows to a great height; narrow and columnar. Forms a strong contrast with most other trees, hence of great value in landscape work.



Prunus amygdalus fl. pl. Double-Flowering Almond

PRUNUS

As this is such a diversified genus, we have subdivided it below into Almond, Cherry, Peach and Plum to make descriptions simpler and more readily understood. All are trees of small or medium size with very beautiful flowers, which appear before or very soon after the leaves.

ALMOND

P. amygdalus flore pleno. DOUBLE-FLOWER-ING ALMOND. Growth vigorous. Flowers borne in greatest profusion before leaves appear; double pink, resembling small roses.

CHERRY

P. avium flore pleno. LARGE DOUBLE WHITE CHERRY. Growth similar to the common sweet cherries. Flowers are large, purest white, very double and perfectly formed, like a miniature double white Camellia. So free flowering as to cover the tree when in bloom.

P. pseudo-cerasus. JAPANESE FLOWERING CHERRY. Growth about like the sweet cherries. Leaves bronze colored at first, later green. Flowers, borne before leaves are fully developed, are large, single, delicate blush pink. The celebrated flowering cherry of Japan.

P. pseudo-cerasus flore pleno. JAPANESE DOUBLE PINK CHERRY. Identical with preceding except that flowers are double.

PEACH

P. persica. FLOWERING PEACH. Highly prized for the great masses of double flowers borne early in spring before leaves appear. For best results they should be heavily pruned each year as soon as they have finished blooming. There are several forms and colors as follows:

Camellia-Flowered. Double, large, rich red.

Double Red. Semi-double, bright red.

Double Rose. Double, pale rose.

Double White. Double, pure white.

Early Red. Semi-double. Bright crimson. The first to bloom.

Versicolored. Semi-double. Has the wonderful habit of producing both pure white and clear red flowers all over the tree. Some flowers are even part red and part white. Often a shoot only a few inches long will have about an equal number of red and white flowers. Curious and handsome.

P. cerasifera atropurpurea (P. pissardi). PUR-PLE-LEAVED PLUM. Very ornamental small

tree. Leaves deep purple in spring, gradually be-coming greenish. Flowers numerous, white, ap-pearing before leaves. Fruit reddish purple. Doubly beautiful and desirable for both blossom and foliage.

P. cerasifera laciniata. CUT-LEAVED PLUM. A form of Cherry Plum with deeply cut, fern-like leaves. Blooms freely in early spring. Handsome throughout the season. Originated with us.

P. "Vesuvius." BURBANK'S PURPLE-LEAVED P. "Vesuvius." BURBANK'S PURPLE-LEAVED PLUM. Differs from common Purple-Leaved Plum in its more vigorous growth, with longer, willowy branches and much larger, longer leaves. Color of foliage is very pronounced and held well through the season. Very fine.

PTEROCARYA

P. stenoptera. China. 50 ft. Of similar appearance to Black Walnut, to which it is nearly related. Leafstalks winged. Bears small winged nuts in long, drooping clusters.

PYRUS: Apple

The flowering species and varieties of the apple and crab-apple make very handsome small trees. Most of them are very free flowering in early spring.

P. atropurpurea. Growth strong. Flow double, along stems, deep purplish red shell pink when open. March and April. P. "carnea pleno." Strong grower. double, flesh color, borne in clusters. Flowers semi-

P. coronaria. FRAGRANT GARLAND. Uvigorous growth. Flowers single, blush, scented.

P. floribunda halliana. Dwarf, compact tree, Flowers semi-double, deep rose and do not fade; produced in drooping clusters.

P. floribunda scheideckeri. Growth Flowers full, semi-double; red in bud, rosy pink when open.

P. loensis bechteli. BECHTEL'S DOUBLE-FLOWERING APPLE. Small tree. Flowers double, delicate pink, very fragrant; produced from the first year. One of the best flowering trees.

P. kaido. A Japanese species. Growth rapid. Flowers single, pink and white, in great profusion on long branches.

P. niedwetzkyana. A curiosity from Siberia. The entire tree—bark, wood, fruit and foliage, except old leaves—is red. Free bloomer and bears adulal fruit edible fruit.



Prunus pseudo-cerasus JAPANESE FLOWERING CHERRY See page 45

PYRUS: Apple-Continued

P. spectabilis. CHINESE FLOWERING APPLE. Small tree. Flowers are single, coral red in bud, but much lighter when fully opened.

P. spectabilis albo pleno. semi-double, white. Fragrant. Flowers very large.

P. spectabilis roseo pleno. Flowers very large, semi-double, pink. Fragrant.

QUERCUS: Oak

The deciduous oaks are grand, long-lived trees of sturdy growth. They impart an air of permanence and stability to their surroundings. All bear acorns and have the lobed leaves characterizing the deciduous species.

Q. cerris. TURKEY OAK. Europe; Asia. 120 ft. A very handsome and symmetrical tree. Leaves deeply lobed, dark green and rough above, gray and downy beneath.

Q. coccinea. SCARLET OAK. Eastern U. S. 50 ft. Grows rapidly and forms round-topped, open head. Does well in dry situations. Leaves deeply divided, and turn to a vivid, brilliant scarlet in fall.

CALIFORNIA WHITE OAK. Q. douglasi. tall, spreading tree slightly lobed leaves. tree with oblong, bluish-green,

Q. garryana. OREGON OAK. Pacific Coast. 100 ft. Large tree with wide-spreading branches; bark light gray. Leaves dark green above, lighter and downy below. An important native timber tree.

Q. kelloggi (Q. californica). CALIFORNIA BLACK OAK. 80 ft. Rather large tree with stout, spreading branches. Leaves variable, but rather large and always deeply lobed. Bark furrowed on

runk, smooth on branches. Wood brittle.

Q. lobata. CALIFORNIA WEEPING or VAL-LEY OAK. California. 100 ft. Large tree with great, wide-spreading limbs and slender, drooping

branches. One of the largest spreading trees native to California. The renowned Sir Joseph Hooker Oak, near Chico, is of this species.

Q. macrocarpa. BUR OAK. Eastern U. S. 150 ft. A wide-spreading tree, with corky branches and very large, deeply lobed leaves. The acorn cups are fringed and bur-like. One of the grandest and noblest Oaks.

Q. palustris. PIN OAK. Eastern U. S. 80 ft. Foliage deep green, finely divided; as the tree grows, the branches droop until the lower ones touch the ground. The foliage takes on a partly scarlet and yellow color early in the fall. Very handsome.

Q. rubra. RED OAK. Eastern U. S. 100 ft. Beautiful Oak of rather rapid growth; forms large, majestic tree. Foliage turns dark red in autumn.

Q. serrata. Korea; Japan. Upright growing. Leaves dark, glossy green, greatly resembling those of Chestnut.

ROBINIA: Locust

Flowering trees of varying growth. All have pinnate leaves and pea-shaped flowers in drooping clusters. Some are thorny.

R. hispida. ROSE ACACIA. Naturally of weak, shrubby growth. When grafted on vigorous stock it forms a small tree. Easily distinguished from Pink-Flowering Locust by the larger, deeper pink flower and by the short, soft bristles on most parts of the plant. This species succeeds well in California and is highly prized as a beautiful flowering tree.

R. neo-mexicana. NEW MEXICO LOCUST. In its native state a shrub, but worked on strong stock makes a small tree of moderate growth. Flowers rose color, in drooping racemes.

R. pseudacacia. COMMON or BLACK LOCUST. 80 ft. A native American tree of extremely rapid growth, valuable for timber as well as quite ornamental. The flowers are in long, pendulous racemes, white and very fragrant, appearing in June. Will flourish in many places where no other tree



Robinia pseudacacia decaisneana PINK-FLOWERING LOCUST See page 47

R. pseudacacia bessoniana. THORNLESS LOCUST. A noble tree of dense, regular growth, with dark green, heavy and luxuriant foliage; entirely without thorns. Most ornamental of the family.

R. pseudacacia decaisneana. PINK-FLOWER-ING LOCUST. Remarkable for its vigorous growth and fine, pink-colored flowers, which it produces in great abundance. Entirely distinct from Rose Acacia, which see above.

SALIX: Willow

Mainly weeping trees, but some are of upright growth. Other sorts will be found in the next section.

S. vitellina aurea. GOLDEN WILLOW. Handsome, spreading tree of rapid growth. Bark is bright golden yellow, particularly showy during winter and early spring.

S. "Ural Golden." Of upright, bushy growth. Branches red in summer, yellow in winter. Leaves long and slender, finely serrated.

in large clusters. Handsome tree with decided individuality. First class for street planting.

S. platanifolia variegata. A form having leaves eely variegated with creamy white. Very striking.

TAXODIUM

T. distichum. BALD CYPRESS. Eastern U. S. 100 ft. A deciduous conifer. Tall tree of regular and symmetrical growth. Foliage somewhat similar to Redwood, but more delicate, soft and feathery and very light green. Particularly striking in the fall, when leaves slowly turn brown before the branchlets fall off. Although native to very moist, swampy regions, it does well in California.

TILIA: Linden

Fine, stately trees of large size and rapid growth. Leaves large and heart-shaped. Flowers yellow, in drooping clusters; intensely fragrant. Well liked by bees for the very abundant nectar.



Prunus persica. Double White-Flowering Peach See page 45

SOPHORA

S. japonica. PAGODA TREE. Asia. 60 ft. A handsome tree of medium size, with dark green bark. Leaves are pinnate; leaflets dark green above, lighter beneath. Bears small, cream-colored, pea-shaped flowers in racemes about a foot long.

SORBUS

S. aucuparia. EUROPEAN MOUNTAIN ASH; ROWAN TREE. 40 ft. Handsome, small tree of erect growth. Leaves pinnate, leaflets serrate. Flowers white, in flat clusters, four or five inches broad, followed by rather large, red berries. Very handsome at any season.

nandsome at any season.

S. domestica. SERVICE TREE. Mediterranean region. 50 ft. Symmetrical tree of very erect growth, nearly round-headed. Leaves pinnate, leaflets 11 to 17, coarsely serrate and rather large. Flowers white, in large, loose clusters, followed by reddish yellow fruits, apple or pear-shaped, about an inch in diameter. These are not only very ornamental, but edible as well after being kept long enough to become soft and lose their astringency. gency.

STERCULIA

S. platanifolia. JAPANESE VARNISH TREE; CHINESE PARASOL TREE. China; Japan. 60 ft. Round-headed tree of medium growth. Branches green, quite stout. Leaves very large, three or five lobed, on long stalks. Flowers cream color,

T. americana. AMERICAN LINDEN; BASS-WOOD. Eastern U. S. 75 ft. Fine tree of rapid, erect growth when young, but ultimately forming a fine, broad, round head. Leaves very large, light

T. platyphyllos. EUROPEAN LINDEN; LIME TREE. Europe. 90 ft. The celebrated European street tree. Similar to American, but has smaller, deeper green leaves and red or yellow branches.

T. tomentosa. SILVER-LEAVED LINDEN. Europe. 40 ft. Growth very erect. Leaves dark green above and silvery white beneath. Very striking and handsome.

ULMUS: Elm

Widely known and popular trees. All are of rapid, erect growth and several species are well adapted for street planting. Very easily transplanted.

U. americana. AMERICAN or WHITE ELM. United States. 120 ft. A magnificent tree, native from the Rockies to the Atlantic. Growth is erect, with smaller branches drooping when old. Grows rapidly here.

U. campestris. ENGLISH ELM. Europe; Africa; Asia. 100 ft. An erect, rapid-growing tree of spreading growth. Branches sometimes more or less corky. Leaves smaller than those of American, remain on tree late in fall.



Ulmus scabra huntingdoni Huntingdon Elm

ULMUS: Elm-Continued

U. campestris clemmeri. A variety of the English Elm, forming a narrow, pyramidal tree with spreading, short branches and oval, somewhat rough leaves.

- U. campestris cornubiensis. WHEATLEY'S ELM, Compact and upright grower, with medium to small, dark foliage. Bark smooth. A superb shade tree for lawn or roadside.
- U. campestris latifolia. BROAD-LEAVED ENG-LISH ELM. Handsome variety. Leaves larger and smoother than the type, appearing earlier in the spring and retained later in the fall.
- U. campestris suberosa. CORK ELM. Another variety of English Elm, distinguished from it by the dense growth of cork almost covering the limbs, which spread horizontally. Leaves dark green and very rough. This has proved to be a desirable deciduous street and avenue tree for the Western States.
- U. campestris variegata. VARIEGATED ELM. A variety of English Elm, having all the leaves sprinkled over with silvery spots. Holds variegation throughout the summer.
- U. scabra. SCOTCH or WYCH ELM. Europe; Asia. 100 ft. Large tree of rapid, spreading growth. Foliage very large and rough.
- U. scabra dovaei. A variety of Scotch Elm with upright, vigorous growth and pyramidal form. An excellent street tree.
- U. scabra huntingdoni. HUNTINGDON ELM. Of very erect habit and rapid, vigorous growth. Bark clean and smooth. Foliage dense, leaves large, dark green, remaining on the tree until late. Fine for street and avenue planting. The handsomest of all Elms.

ZELKOVA

Z. acuminata (Z. kaki). JAPANESE ELM. Japan. 100 ft. An excellent but little known tree of rapid growth, forming broad, round-topped head. Leaves much like Elm, but smaller and more coarsely serrate. Succeeds admirably in California.

ZIZYPHUS

Z. jujuba. Asia. 30 ft. One of the handsomest smaller deciduous trees. Regularly round-headed, main branches stout, but secondary branches or branchlets very fine, often thread-like and drooping, bearing small, light green, highly glossy leaves. Fruit edible.

DECIDUOUS WEEPING TREES

HE trees in this class are characterized by the tendency of the branches to droop or even grow directly downward. Almost all are beautiful specimen trees, sharply distinguished from the preceding class by their habit of growth, which renders them invaluable for making a contrast in large plantings. Varying in size from the diminutive Weeping Cherry to large trees like the Weeping Willow, they offer a wide range for choice. In waterside planting the use of this class of trees is imperative if natural landscape effects are to be reproduced. They require little or no pruning.

ACER: Maple

A. saccharinum wieri. WIER'S CUT-LEAVED MAPLE. 75 ft. A rapid-growing, graceful form of the Silver Maple with long, slender, drooping branches. Foliage abundant, deeply and delicately divided.

BETULA: Birch

B. alba pendula laciniata. CUT-LEAVED WEEPING BIRCH. 75 ft. Very beautiful form of European White Birch. The main trunk, with snow-white bark, grows straight as an arrow. Branches spread but slightly, while the fine, slender shoots hang vertically. The foliage is fine and deeply cut. Many consider this the most beautiful deciduous tree in cultivation.

CRATAEGUS: Thorn

C. monogyna pendula. WEEPING HAWTHORN. A pretty, drooping variety of English Hawthorn, with slender branches.

FRAXINUS: Ash

F. excelsior pendula. EUROPEAN WEEPING ASH. Forms large, spreading tree. One of the best for arbors and shady seats.



Pyrus kaido. Flowering Apple "Kaido" See page 45

JUGLANS: Walnut

J. regia pendula. WEEPING WALNUT. A form of the "English" Walnut in which the branches grow almost directly downward. Top grafted on ordinary walnut stock, it forms a beautiful specimen tree. Bears edible nuts of very good quality.

LABURNUM

L. vulgare pendulum. WEEPING LABURNUM. A form of common Laburnum with drooping branches.

MORUS: Mulberry

M. alba tatarica pendula. TEA'S WEEPING MULBERRY. Graceful and hardy weeping tree, forming a perfect umbrella-shaped head, with long, slender, willowy branches drooping to the ground.

POPULUS: Poplar

P. tremula pendula. WEEPING POPLAR. One of the most showy of the top-grafted weeping trees. The head is large and graceful, the fine branches growing to the ground on all sides. Forms a natural "summer-house." The large catkins are borne profusely in the early spring considerably before leaves, which are large and deeply serrated.

PRUNUS: Cherry

P. pendula. JAPANESE WEEPING ROSE-FLOWERING CHERRY. Top-worked on ordinary cherry stock, this makes as dainty a weeping tree as can be imagined. The branches are very slender and gracefully drooping. The flowers are rosepink, borne all along the branchlets early in spring before leaves appear.

SALIX: Willow

- S. babylonica. WEEPING WILLOW. The common and well-known Weeping Willow.
- S. babylonica aurea. GOLDEN WEEPING WIL-LOW. Variety of preceding of identical habit. Differs in the intense golden hue of the branches, making it particularly handsome during the winter.
- S. "Lick's Weeping." A beautiful weeper. It is a cross between the Common Weeping Willow and the Black California Willow. It has the pendulous habit of the former and the large, glossy leaves of the latter.

SORBUS: Mountain Ash

S. aucuparia pendula. WEEPING MOUNTAIN ASH. Always top grafted. Limbs grow almost directly downward, giving tree a unique appearance. Fine lawn tree.

ULMUS: Elm

U. scabra pendula. CAMPERDOWN ELM. Always top grafted. Limbs grow outward and downward, giving the trees a remarkably picturesque aspect.

DECIDUOUS SHRUBS

CLASS of shrubs too little planted in our State. Few of the evergreens are as free bloomers as the best of the deciduous. Of course, they are bare during the winter, but the beautiful, fresh spring foliage, so often accompanied by the flowers, more than compensates. To ignore them means to lose many of the very best things available for our climate. Nearly all are very hardy, and with few exceptions will stand zero or below.

A good general rule is to prune these shrubs when they have finished blooming. This is very necessary with such as bloom from the old wood of the previous season; observation will show which these are. To prune them when dormant spoils their chances of flowering. Those which bloom from new wood of the current season's growth can be pruned either when dormant or after flowering. By pruning we do not mean shearing, which is good for hedges but not for single plants.



Prunus pendula. Japanese Weeping Cherry See page 49

ACER: Maple

MAPLE. A. palmatum. JAPANESE MAPLE. 15 ft. Shrubs or very small trees. Extremely handsome on account of their graceful habit, elegant foliage and rich tints. They are of slow growth and should always be given at least partial shade. There are a large number of varieties, differing in the form and color of leaves; some are so finely cut as to be fern-like, some have deep red or varietized foliage. Selections are best made by seeing the plants, or sample leaves of different kinds will be mailed on request during the growing season. palmatum. JAPANESE

ARALIA

A. spinosa. HERCULES CLUB. S. E. United States. 40 ft. Very tall shrub or even tree, having few or no side branches, with enormous but finely divided, bipinnate leaves. Flowers white, in extremely large panicles. Stem and leafstalks armed with numerous prickles. Altogether a plant of curious and very striking appearance. Rare on this Coast.

AZALEA

A. sinensis (A. mollis). China; Japan. 8 ft. Small shrub bearing large and very handsome



Diervilla florida (Weigela rosea) See page 53

flowers early in spring before the leaves appear. The coloring is wonderful and ranges through shades of red, orange and pink, some almost white. Very fine.

BERBERIS: Barberry

Spreading shrubs with spines and rather small, green leaves, yellow flowers and numerous small

B. thunbergi. THUNBERG'S BARBERRY. 4 ft. Handsome, low-growing shrub. The branches arch outward in a very graceful manner. Leaves rather small and color beautifully in fall. Flowers borne singly along the branches; berries bright red.

B. vulgaris. COMMON BARBERRY. Europe; Asia. 8 ft. Branches grooved; leaves one to two inches long. Flowers and berries in numerous drooping racemes all along branches. Berries purple or red.

B. vulgaris atropurpurea. PURPLE-LEAVED BARBERRY. A very handsome variety of the preceding, with purple leaves. Probably the best shrub of its color.

BOUVARDIA

B. triphylla (B. jacquini). Mexico and Arizona. 3 ft. Small, downy shrub of erect growth, with leaves in whorls of three around branches. Prized for its bright red, tubular flowers, which are about an inch long and borne in clusters. Blooms all

CAESALPINIA: Poinciana

C. gilliesi. S. America. 10 ft. Tall shrub or sometimes small tree. Growth very vigorous. Leaves doubly pinnate with small leaflets. Flowers large and borne in clusters, extremely showy, having light yellow petals and long, brilliant red stamens. Blooms almost continuously all summer. Sometimes called "Bird of Paradise Flower," a name that is also applied to Strelitzia reginae.

CALYCANTHUS

Small, aromatic shrubs with rather large leaves and very fragrant, curiously formed flowers.

C. floridus. SWEET-SCENTED SHRUB. S. E. United States. 6 ft. Flowers reddish brown. Entire plant fragrant. Summer bloomer.

C. praecox. China; Japan. Flowers yellow, striped brown inside. Blooms early before leaves appear. About the earliest flowering deciduous shrub we have.

CARYOPTERIS

C. mastacanthus. BLUE SPIREA. China. 5 ft. Shrub of moderate, compact growth, with opposite, gray, downy leaves. Flowers bright blue, small but in large clusters in axils of leaves. In bloom all through the summer. Very valuable for its unusual color and long blooming period.

CERCIDIPHYLLUM

C. japonicum. Japan. 30 ft. Shrub or bushy tree with inconspicuous flowers, but valued for its very beautiful foliage. Leaves rather small, usually heart-shaped, purple on the new growth, becoming light green and changing to yellow and scarlet in the fall. Quite rare.

COLUTEA

C. arborescens. BLADDER SENNA. Europe; Africa. 15 ft. Large shrub with pinnate leaves of numerous small leaflets. Has yellow, pea-shaped flowers in short racemes. Pods are inflated and bladder-like, greenish red.



Exochorda grandislora. Pearl Bush See page 54

CORNUS: Dogwood

Medium-sized shrubs and small trees with small, white flowers in numerous clusters. (C. florida has apparently large flowers.) Of very easy cul-

ture and extremely hardy.

C. alba sibirica. SIBERIAN DOGWOOD. 10 ft.
Growth erect. Branches bright red, particularly
conspicuous in winter. Flowers creamy; berries

light blue.

C. alternifolia. BLUE DOGWOOD. Eastern U. S. 25 ft. Large shrub or small tree. Branches glaucous blue, in irregular whorls. Leaves large, alternate. Flowers fragrant, cream colored, in clusters. Berries dark blue on red stems.

clusters. Berries dark blue on red stems.

C. florida. FLOWERING DOGWOOD. N. America. 15 ft. Large shrub or small tree. Differs from the others in having each flower cluster surrounded by four large, white bracts, the whole looking like a very large flower. Leaves large, dark green, turning bright red in fall. Native of Eastern States; rare in California.

C. japonica alba. White shaded pink. JAPAN WHITE QUINCE.

C. japonica grandiflora rosea. Has very large, rosy pink flowers.

C. japonica sanguinea. Flowers very dark red. Often semi-double.

CYTISUS: Broom

Shrubs with clover-like foliage and pea-shaped. vellow flowers

C. sessilifolius. S. Europe. Finely branched shrub. Leaves not downy. Flowers in short racemes.

C. triflorus. Europe; Africa. Flowers stalks and borne all along the branches. Flowers on long

DEUTZIA

Very beautiful, free-blooming, Asiatic shrubs with bell-shaped flowers produced during spring



Edgeworthia gardneri See page 53

C. sanguinea. Europe; Asia. 12 ft. Large shrub with blood-red branches. Leaves downy on both sides. Flowers greenish white, in dense clusters. Berries black.

CORYLUS: Filbert

C. maxima purpurea. PURPLE-LEAVED FIL-BERT. Large shrub with large, round leaves, in-tensely dark, bronzy purple in spring, becoming greenish toward fall. Very distinct even among other purple-leaved trees and shrubs.

CYDONIA: Quince

Handsome, well-known shrubs, flowering freely in early spring. Excellent for cutting, as shoots with unopened buds will keep for two or three weeks in water, the flowers gradually unfolding. Fruit is very aromatic.

C. japonica. JAPAN SCARLET QUINCE. China; Japan. 8 ft. An old favorite. Flowers brilliant scarlet. Makes an impassable and beautiful flow-

ering hedge.

and early summer. Should certainly be more widely planted in California. All listed below are garden hybrids or varieties.

are garden hybrids or varieties.

D. fortunei. 6 ft. Handsome hybrid of strong growth. Flowers are large, single and pure white.
D. gracilis rosea. 3 ft. One of our dantiest and most graceful flowering shrubs. Branches are extremely slender and arching, covered with a profusion of small, beautifully formed flowers, which are bright pink in the bud and pale flesh when fully opened. Altogether a most charming plant.
D. lemoinei. 3 ft. Growth similar to preceding, but a little more vigorous. Flowers pure white. Very free flowering.
D. "Pride of Rochester." Tall growing. Flowers large and double; white, slightly tinged pink on back of petals.

back of petals.

D. scabra candidissima. 6 ft. Growth vigorous and erect; leaves dark green. Flowers double and pure white.

D. scabra plena (D. crenata rosea plena). 6 ft. Growth like preceding; leaves lighter green. Flowers double; white, tinged rose outside.



Forsythia suspensa. Golden Bell See page 54

DIERVILLA (Weigela)

A most desirable class of free-flowering shrubs. In late spring they are simply a mass of trumpet-shaped flowers, showing a profusion of bloom that is almost unequaled. Colors in the different varieties range from nearly white through pink to deep red and crimson.

D. florida (Weigela rosea). China. 6 ft. An old favorite and probably still the most popular. Flowers pink, large and borne in the utmost profusion.

The following named varieties are all or mainly hybrids:

Abel Carriere. Flowers rosy carmine, changing to red, yellow in the throat.

Dr. Baillon. Growth strong and spreading.

Flowers dark crimson.

Eva Rathke. Growth erect. Flowers mediumsized. Deep carmine red. Very fine.

Hendersoni. Growth upright and compact. Flowers deep rose.

Lavallei. Growth very strong. Flowers bright

but very deep crimson.

Van Houttei. Growth strong and spreading.
Flowers pink, shaded carmine.

EDGEWORTHIA

E. gardneri (E. papyrifera). Asia. A very rare and beautiful flowering shrub. Of loose, spreading growth with few branches, which are rather stout and very flexible. Leaves lanceolate, about six inches long and an inch wide. The glory of the plant lies in the flowers, which are produced before leaves have even commenced to appear. They are small, crowded into dense globular heads, yellow and almost as fragrant as a Daphne, to which this plant is closely related. Its appearance during flowering period is absolutely unique and extremely attractive.

ELAEAGNUS

E. longipes. Japan; China. 6 ft. Very ornamental shrub of spreading habit. Branchlets ruddy brown. Leaves silvery, brown dotted beneath. Flowers small but numerous, yellowish white and fragrant, followed by scarlet fruits nearly an inch long, on elongated stalks. The fruit is not only edible, but adds greatly to the effect of the plant.

EUONYMUS

E. europaeus. SPINDLE TREE. Europe; Asia. 20 ft. Large shrub of rather straggling growth.

Flowers creamy white in spring. Very valuable for the showy red fruit in the fall. Excellent for decoration. Foliage also colors yellow and red.



Hydrangea arborescens sterilis
HILLS OF SNOW
See page 54



Hydrangea hortensis

EXOCHORDA

E. grandiflora. PEARL BUSH. China. 10 ft. Large shrub, blooming early in spring, when the entire plant is covered with purest white blossoms. The common name is from the pearly flower buds, which are globular just before they open. The finest white flowering shrub of early spring.

FORSYTHIA: Golden Bell

Japanese shrubs bearing golden vellow flowers very early in spring. Flowers have four slender, spreading petals and appear in small clusters along the branches.

F. suspensa. China. 8 ft. Rather tall, but with ery drooping branches. Can be trained over arbors.

F. suspensa fortunei. A variety of more upright and vigorous growth. Petals more slender.

FUCHSIA

F. magellanica riccartoni. 10 ft. Large, dense shrub with fine, slender branches and small leaves. Of entirely different appearance from the ordinary Fuchsias. The flowers, while much smaller, are miniature reproductions and are borne in the greatest profusion throughout the entire summer and fall. Humming birds seem to be greatly attracted, probably by the color of the flowers. Very fine and rather rare. rather rare.

HIBISCUS

Shrubs with mallow-like flowers. The two following species have little resemblance except in form of flowers.

H. mutabilis. CHANGEABLE HIBISCUS. China. 20 ft. Tall shrub or small tree with large, downy leaves. The large flowers are pure white in the morning, changing to a pink at noon, and by

night are of a uniform light red. The contrast between them and the newly opened ones is very striking. Rare.

H. syriacus. ALTHEA; ROSE OF SHARON. Asia. 12 ft. Large, much-branched shrubs. Leaves appear rather late in spring and flowers, in a variety of colors, in late summer and fall. We offer the following-named varieties, which differ only in color. All have double flowers.

Ardens. Purple, changing to blue. Early and very free blooming.

very free blooming.

Boule de Feu. Purplish red.
Carnea plena. Flesh, red at base; large. Vigorous grower. Blooms late. Excellent.
Duchesse de Brabant. Red. Strong grower.
Elegantissima. White, crimson at base.
Jeanne d'Arc. Pure white.

HYDRANGEA

Well-known shrubs bearing enormous cymes or panicles of pink or white flowers. They thrive best in partial shade. Hot sun is particularly harmful to H. hortensis and its varieties. We are often asked about "Blue Hydrangeas." pink kinds can be made to bear blue flowers by mixing in plenty of iron filings, old nails or any scrap iron around the roots.

H. arborescens sterilis. HILLS OF SNOW, 10 ft. Native American shrub, considered in the East to be the best acquisition in years. Cymes shaped like our common pink variety, but snow white. Blooms from early to late summer. Of great value for sections too cold for the hortensis types.

H. hortensis. China; Japan. 8 ft. The most common form in California. Large leaves, pink flowers in large cymes. Blooms all summer.

H. hortensis aigaka. A curious variety of preceding. The center flowers have no petals, but those around the outside are exceptionally large and purplish pink and purplish pink.

H. hortensis rosea. Similar to the type. Leaves are smaller and more finely serrate. Flowers deep rose color in somewhat smaller heads.

H. hortensis "Thomas Hogg." A variety with small leaves and very large heads of white flowers. Hardy and very fine.



Hydrangea hortensis variegata VARIEGATED HYDRANGEA See page 55



Magnolia soulangeana. CHINESE MAGNOLIA See page 56

H. hortensis variegata. VARIEGATED HY-DRANGEA. Of the hortensis type, but differs in foliage and blooming. Leaves marked about equally white and green. The inner flowers in the head are small and violet tinted, the outer ones large and white. Very showy.

H. paniculata grandiflora. Entirely distinct from hortensis types. Flowers white, in very large, pointed panicles at end of branches during late summer. The flowers remain on bush for a long time, turning pinkish. Especially adapted to cold sections.

KERRIA (Corchorus)

K. japonica. JAPANESE ROSE. Japan. Shrub having numerous, very erect, long and slender branches with bright green bark. Flowers are clear yellow, similar to a small, single rose.

K. japonica aurea. A variety with golden-hued foliage.

K. japonica flore pleno. DOUBLE-FLOWERING KERRIA. Variety of stronger growth with very double flowers. Free blooming and deservedly popular.



Prunus japonica. DWARF DOUBLE-FLOWERING ALMOND See page 57

JASMINUM: Jasmine

J. fruticans. Mediterranean region. 10 ft. Erect shrub with slender, angular, green branches. Leaves clover-like. Flowers bright yellow during summer. Nearly evergreen. For other Jasmines see Climbing Plants.

LAGERSTROEMIA: Crape Myrtle

L. indica. China. 20 ft. Shrub or small tree with very smooth bark. Foliage somewhat scanty. Flowers pink, purple, scarlet and white. Aside from a tendency to mildew in the coast regions, the Crape Myrtles are very desirable shrubs, being in bloom through most of the summer.

LEYCESTERIA

L. elegans. 12 ft. Rare and handsome shrub of strong growth. Flowers white, slightly tinged purple, in drooping racemes. Berries and bracts surrounding them turn vivid purple, making a striking contrast with the green foliage and branches.

LIPPIA

L. citriodora. LEMON VERBENA, S. America. 12 ft. Well-known old favorite. Foliage strongly lemon scented. Flowers are lavender or nearly white, minute, borne in a delicate, loose panicle.

LONICERA: Honevsuckle

L. tatarica. TARTARIAN HONEYSUCKLE. Asia. 10 ft. Compact, much-branched, leafy shrub of pleasing appearance. Bears small, pink flowers of typical Honeysuckle form. Not at all climbing. For other Honeysuckles see Climbing Plants.

M. soulangeana alba superba. Similar to type, but with pure white flowers.

M. soulangeana alexandrina. Growth vigorous nd erect. Flowers appear very early. Color same and erect. as type.

M. soulangeana amabilis. Handsome form with nearly white flowers.

M. soulangeana nigra. Flowers are very dark purple, nearly black, not opening widely.
M. stellata. STARRY MAGNOLIA. 12 ft. Entirely distinct from all of the preceding. Petals are threly distinct from all of the preceding. Petals are very numerous, long and very slender, pink in the expanding bud, white or slightly flushed when fully opened. Shrub is of very slow growth, but starts blooming when only a foot or two tall. Unexcelled for delicate grace and beauty.

M. yulan (M. conspicua). 25 ft. Shrub of moderate growth, ultimately becoming a small tree. Flowers are pure white or faintly greenish white, cup-shaped and exhaling a delicious, spicy fragrance suggestive of lemon. Highly prized.



Magnolia stellata. Starry Magnolia

MAGNOLIA

The deciduous or Chinese Magnolias are of entirely different habit from the better known M. grandiflora or Evergreen Magnolia. The large, silky flower buds are formed in the fall, carried over winter and ready to open in early spring, when before the leaves appear they become a mass of large, showy, sometimes fragrant flowers. With no foliage to hide their beauty at flowering time, they offer one of the most beautiful sights afforded by any tree or shrub.

M. obovata (M. purpurea). 15 ft. Of medium growth. Flowers purple and do not open widely. Makes a beautiful and striking contrast with the

M. soulangeana. 25 ft. Large shrub or can be trained as a small tree. A hybrid between M. obovata and M. yulan. The flowers are very large and open to a rather broad cup shape; white, more or less freely marked with purple, slightly fragrant. This runs into several varieties, among which are the following:

PAEONIA: Tree Peony

P. moutan. China. 6 ft. Differs from common peonies in being a woodv shrub instead of dying to the ground each year. Flowers are extremely large, borne very early in spring and in a great variety of colors, ranging through red, pink, purple and white. Growth is very slow, but even the smallest white. Grown plants bloom.

PALIURUS

P. spina-christi (P. aculeatus). CHRIST'S THORN. Europe; Asia. 12 ft. Hardy shrubarmed with stipular prickles and having greenish yellow flowers in June and July. Supposed to have furnished the crown of thorns placed on the head of Christ before his crucifixion. of Christ before his crucifixion.

PHILADELPHUS: Mock Orange; Syringa

A well-known class of free-blooming, whiteflowering shrubs of strong and tall growth. Flower in early summer after the spring bloomers.

P. coronarius. GARLAND SYRINGA. Europe; Asia. 10 ft. Flowers creamy white, medium-sized, in very short, dense racemes; as fragrant as orange blossoms.

P. inodorus (P. grandiflorus). LARGE-FLOW-ERED SYRINGA. S. E. United States. 10 ft. Of stronger growth than the common Garland. Flowers borne profusely and larger, but not so fragrant.

P. lemoinei erectus. Garden hybrid. 5 ft. Growth erect, branches very slender, with smooth, brown bark; leaves very small. Flowers fragrant and borne profusely in short racemes.

PRUNUS: Almond: Apricot: Plum

Handsome early blooming shrubs that contribute greatly to the beauty of our gardens in spring.

P. japonica. DWARF DOUBLE-FLOWERING ALMOND. China. 3 ft. Small shrub with slender branches bearing very double flowers in utmost profusion very early in spring. We grow two forms, differing only in color of flowers, one pink, the other white.

P. mume. JAPANESE FLOWERING APRICOT. Large shrub or small tree. Highly valued for its very early blooming. It is usually the first deciduous tree or shrub to blossom in spring, often ap-



Prunus tomentosa



Ribes aureum Yellow-Flowering Currant See page 58

pearing in January. We propagate six types, comprising both double and single forms, with red, pink and white flowers.

P. spinosa. BLACKTHORN; SLOE. Europe; Africa; Asia. Spreading shrub of rather low growth for a Plum. Very thorny. Flowers small, white. Fruit small, deep blue. Wood is valued for making canes.

P. tomentosa. Shrub or small tree with rough and downy leaves. Bears small, single, white flowers in great profusion, followed by numerous small red fruits.

P. triloba. DOUBLE-FLOWERING PLUM. China. Bush with three-lobed leaves. Flowers double, rosy pink and very numerous, appearing before the leaves. Very handsome.

PUNICA: Pomegranate

The flowering Pomegranates are of very great value. Perfectly adapted to our climate, they are in bloom throughout the summer, lending their brilliant coloring at a period when it is greatly needed and appreciated. Foliage is neat, glossy and handsome, with ruddy tints on new growth.

and handsome, with ruddy tints on new growth.

P. granatum. This is the species that furnishes the edible pomegranates. The ornamental varieties include:

Double Red. Flowers large, very double and brilliant scarlet.



Ribes sauguineum RED-FLOWERING CURRANT

PUNICA: Pomegranate-Continued

Double White. Flowers medium-sized, creamy white or light yellow.

Mad. Legrelle. Handsome variegated form. Flowers full and double, light red, conspicuously edged with white.

P. granatum nana. DWARF POMEGRANATE. Very low, compact, free-flowering form. Flowers red, semi-double. Fine for low hedges.

RHUS: Fringe; Sumach

Includes plants of very dissimilar appearance and habit. The Purple Fringe has rather small, entire, rounded leaves; the Sumach, long, pinnate leaves with numerous good-sized leaflets.

R. cotinus. PURPLE FRINGE; SMOKE TREE. Asia. 15 ft. Well-known large shrub with rounded leaves. Flowers borne in peculiar, pale purple, plumy masses. Entirely unique.

R. cotinus atropurpurea. DARK PURPLE FRINGE. A variety of preceding, distinguished by much darker and more compact flower clusters, Foliage colors brilliant red in autumn.

glabra laciniata. CUT-LEAVED SUMACH. 12 ft. Shrub or little tree of slow growth. Leaves pinnate, over a foot long, with leaflets finely cut; fern-like in appearance. Autumn tints very gorgeous.

RIBES: Currant

Shrubs blooming in early spring. The different kinds are very distinct in color and growth. All bloom profusely and are highly attractive.

R. aureum. YELLOW-FLOWERING CURRANT. Foliage shiny. Flowers, yellow, tipped with red, are borne in small clusters all along branches; have

are borne in small clusters all along branches; have a pleasing, spicy fragrance.

R. gordonianum. Hybrid between preceding and following. Growth loose and spreading. Flowers crimson, marked with yellow.

R. sanguineum. RED-FLOWERING CURRANT. California. Handsome shrub with five-lobed, rounded leaves and ruddy branches. Flowers, borne in drooping racemes, are a beautiful shade of rosy red or very deep pink. Berries large, glaucous blue. Both foliage and flowers are very handsome.

SAMBUCUS: Elder

Large shrubs of erect, extremely rapid growth. with large, pinnate leaves. Flowers white, small, in large cymes. Extremely hardy.

S. canadensis aurea. GOLDEN ELDER. Foliage deep golden yellow throughout the season.

S. canadensis laciniata. CUT-LEAVED ELDER. Foliage dark green and deeply cut.
S. canadensis variegata. VARIEGATED ELDER. Foliage strongly marked with creamy white.

SPIRAEA: Spirea

Small or medium-sized shrubs of very free blooming habit, varying in appearance, color of flowers and manner of blooming. All, however, have very small flowers, but assembled into usually compact clusters of different forms.

S. bumaida "Anthony Waterer." Dwarf but erect form, growing about three feet high. Flowers bright crimson, in flattened heads at end of branches. Blooms about midsummer.

S. californica. Growth erect, about six feet high. Flowers reddish pink, in elongated, dense, terminal panicles. Blooms during summer months.

S. cantoniensis (S. reevesi; S. lanceolata). China; Japan. 8 ft. Medium-sized shrub with long, narrow leaves. Flowers pure white and large for the genus, borne most profusely in dense heads. Practically evergreen, as it holds most of its leaves over winter.

over winter.

S. cantoniensis flore pleno. Variety of preceding with very double flowers.

S. prunifolia flore pleno. BRIDAL WREATH. China. 8 ft. Small shrub with long, very slender branches. Flowers very double and pure white, borne along the branches before leaves appear. This is the genuine "Bridal Wreath," a name often incorrectly applied to other species of Spirea.

incorrectly applied to other species of Spirea.

S. thunbergi. China; Japan. 5 ft. Moderate size. Branches slender and arching. Flowers white, single and borne in small, loose clusters along the branches. Blooms very early.

S. van routtei. Garden hybrid. Moderate size.

s. van routtel. Garden hybrid. Moderate size. Branches arching and drooping with the weight of the flowers, which are borne so freely in spring as to cover plant completely with a mass of snowy bloom. Very beautiful and extremely hardy.



Prunus triloba. Double-Flowering Plum See page 57



Spiraea cantoniensis See page 58

STAPHYLEA: Bladder Nut

Large shrubs of erect growth, with coarse, pinnate leaves and white, fragrant flowers, borne in racemes in early spring. Seeds are in greatly inflated, bladder-like pods, borne in pairs or threes.

S. colchica. Europe; Asia. 12 ft. Branches rather slender. Leaflets three or five, pale green on lower surface. Flowers large, in large, compact racemes. Blooms latter part of March, ahead of the following species.

S. pinnata. Europe; Asia. 15 ft. Branches stout. Leaflets five or seven, slightly glaucous on lower surface. Flowers smaller and later than preceding, appearing early in April.

SYMPHORICARPOS: Snowberry

Slender shrubs with fine branches. Valued chiefly for the ornamental fruit, which remains on the plants for a long period. Common name applies only to the first two species, as the third has red berries.

S. occidentalis. WESTERN SNOWBERRY. 5 ft. Native shrub of spreading, arching growth, bearing small, pink flowers and showy clusters of very large, clear white berries at ends of branches.

S. racemosus. EASTERN SNOWBERRY. 5 ft. Indigenous to Eastern States and similar to preceding, but of more erect growth. Fruiting habit

Indigenous to Eastern States and similar to preceding, but of more erect growth. Fruiting habit about the same.

S. vulgaris. INDIAN CURRANT; RED-FRUITED SNOWBERRY. Eastern U. S. 4 ft. Habit similar to the others, but somewhat more compact. Loaded during fall and winter with a profuse crop of dark red, small berries in dense clusters.

SYRINGA: Lilac

Among our best known flowering shrubs. Valued for their fine foliage and fragrant flowers, usually borne in showy panicles. We divide them into two classes; common sorts on their own roots and grafted sorts, mainly hybrids,

COMMON SORTS

S. chinensis sougeana (S. rothomagensis rubra), Flowers single, red, in very large, showy panicles on long stems. Early and fine for cutting.

S. vulgaris alba. COMMON WHITE LILAC. Bears small panicles of pure white and very fra-

grant flowers.

S. vulgaris purpurea. COMMO LILAC, The old, best known sort. COMMON PURPLE

GRAFTED SORTS

Alba Grandiflora. Purest white, single; panicles

Alba Grandiflora. Purest white, single; panicles very large and loose. Growth very vigorous.

Belle de Nancy. Brilliant satiny rose with white center; double. Clusters large. Very fine. Charles Joly. Violet purple; very double. Panicles large and compact. One of the very darkest.

Charles the Tenth. Deep ruddy purple in bud, purplish lilac when open; single. Growth strong and compact. Very free bloomer.

Comte de Paris. Red in bud; bluish purple when open. Very free blooming and later than

most

most.

De Croncels. Red in bud; light pink when open; single; panicles large.

Frau Bertha Dammann. Pure white, single; panicles of medium size and loose. Very fine.

Gigantea. Light blue, single; both flowers and panicles extremely large. Growth upright and very strong. Bluest of all.

Gloire de Lorraine. Purplish red, single; panicles, as well as individual flowers, of large size.

Gloire des Moulins. Pink in bud, rosy lilac when open; single; very fragrant; panicles elongated. Growth compact.

Lemoinei flore pleno. Lilac blue, nearly lavender. Very double with pointed petals; panicles compact, slender and pointed. Entirely distinct in every way.

Ludwig Spaeth. Violet purple, dark; single. Flowers large, panicles long and slender. One of the best.

the best



Spiraea prunifolia fl. pl. Bridal Wreath See page 58



Tamarix parviflora (T. africana)

SYRINGA: Lilac-Continued

YRINGA: Lilac—Continued

Mad. Abel Chatenay. Pure white, double; panicles compact. Free blooming.

Mad. Casimir-Perier. Creamy white; double; panicles large, full and compact.

Marie Legraye. White; single. Extremely free flowering even when small.

Michel Buchner. Pale lilac, very double; panicles small and compact. Very fragrant.

Persian Cut-Leaved. Pale lilac; single; panicles loose on very long stems. Leaves deeply cut. Very free bloomer and fine for cutting.

Philemon. Very dark purple; single; panicles of small or medium size. The darkest single-flowered variety.

Pres. Grevy. Bluish lilac; very double; panicles unusually large and showy. Very handsome.

Pres. Massart. Reddish purple; single.

Rubra Insignis (Sanguinea). Purplish red; single. (Upright grower. Panicles on long stems; fine for cutting.

gle. Upright grower, fine for cutting.

TAMARIX: Tamarisk

Shrubs of rapid growth, sometimes becoming small trees. Foliage very minute and greatly imitating some kinds of Cypress. Flowers small but very numerous, in various shades of pink, completely covering the plants in spring.

T. algerica. Growth spreading. Foliage grayish green.

green.

T. hispida aestivalis. Has the unusual and valuable habit of blooming twice a year, in spring and again in late summer. Growth slender and upright.

T. odessana. Asia. Growth erect and compact. Foliage plumy. Appearance entirely distinct from the others. Can be trained into quite a tree.

T. parviflora (T. africana). Europe. 15 ft. Growth slender and upright. Very free bloomer and earlier than the others.

T. parviflora purpurea. Growth strong and upright. Makes a good tree. Blooms after the others. Extremely free bloomer.

VIBURNUM: Snowball

The first species below does not have the "Snowball" type of bloom, but is distinct and

nandsome.

V. opulus (V. oxycoccus). CRANBERRY BUSH.
Europe; Asia; N. America. 12 ft. The natural form
of the "Common Snowbail." Identical except that
the flower heads have the large, sterile flowers only
around the edge. In the center are the small, fertile flowers. Blooms in late spring. Berries are
bright scarlet and last all winter. Foliage colors

V. opulus sterile. COMMON SNOWBALL. Well-known shrub, bearing large, globular clusters of white flowers during late spring. Foliage colors brilliantly in fall.

V. tomentosum plicatum. JAPANESE SNOW-BALL. Flower heads rather smaller, but borne more profusely. Leaves strongly plaited and not lobed. Makes a more compact shrub than the common variety.

VITEX

V. incisa. CUT-LEAVED VITEX. China. 6 ft. Very graceful shrub of loose, open habit. Leaves palmate, the five leaflets deeply cut, heightening the delicate appearance of the plant. Flowers small, pale lilac, in slender, panicled, erect racemes. Foliage assumes brilliant autumnal tints.

XANTHOCERAS

X. sorbifolia, YELLOW HORN. China. 20 ft. Easily one of the most beautiful deciduous flowering shrubs. Growth strong and upright. Leaves pinnate, much resembling those of Mountain Ash. Flowers funnel-shaped, with five white, crinkled petals. At base inside are five little, bright yellow horns, also a conspicuous yellow blotch which soon turns red. Blooms most profusely in late spring. Splendid.



Xanthoceras sorbifolia. YELLOW HORN

CLIMBING PLANTS

S this section includes both evergreen and deciduous vines, we have shown in each case to which class the plant belongs and have also indicated just how each one climbs; whether by twining, tendrils, rootlets, etc. This will help in making selections for various purposes and locations. The best to cling to bare walls without any other support are Ampelopsis tricuspidata (Boston Ivy), Bignonia tweediana, Ficus pumila (Climbing Fig) and Hedera helix (English Ivy); all are evergreen except the first.



Bignonia tweediana

ACTINIDIA

A. chinensis. China. Very strong-growing, twining, deciduous climber. Leaves very large, rounded, downy beneath. Branchlets and leafstalks are densely covered with bright red hairs. Flowers, about two inches broad with five spreading petals and a mass of stamens, are creamy white, soon turning yellow. Quite out of the ordinary in every way.

AKEBIA

Handsome twining vines with dense, semievergreen foliage. Flowers, borne in early spring, are small, in short racemes, a peculiar shade of livid purple.

A. lobata. China; Japan. Leaves of three large leaflets, deeply or slightly lobed, sometimes only wavy-margined. Foliage very dense. Rare.

A. quinata. China; Japan. Leaves of five small leaflets. Foliage more graceful and less dense than preceding.

AMPELOPSIS

Well-known deciduous vines climbing by tendrils. All assume most gorgeous autumnal tints, Virginia Creeper first and Boston Ivy later. Both types are extremely hardy. For Evergreen Ampelopsis see Cissus.

A. quinquefolia. VIRGINIA CREEPER; WOOD-BINE. Eastern U. S. Very well known. Leaves large with five leaflets. Berries dark purple with a bloom, borne on red stalks. Foliage colors a most intense scarlet early in the fall.

A. tricuspidata (A. veitchi). BOSTON IVY; JAPAN IVY. China; Japan. Perfectly distinct from Virginia Creeper. Leaves on very young plants are divided into three separate leaflets, but on older plants are merely three-lobed. Foliage is dense and very glossy. Tendrils furnished with small discs, which adhere tenaciously to brick, stone or even wood. Foliage turns yellow and red in fall later than Virginia Creeper and persists longer. It is sometimes supposed that there is a large-leaved and small leaved variety, but this is incorrect, as close observation will show that while the leaves produced on the spurs may be several inches broad and have a stalk nearly a foot long, those on the growing shoots of same plant will be exceedingly small, with stalks under an inch in length.

A. tricuspidata atropurpurea. Variety of preced-

A. tricuspidata atropurpurea. Variety of preceding with larger leaves. Young growth in spring is purple. Foliage turns bright purple in fall.

BIGNONIA

Handsome evergreen climbing vines, mostly clinging by tendrils and bearing showy, tubular flowers. The following sorts all have pinnate leaves:

B. buccinatoria (B. cherere). Mexico. Leaflets long. Branches inclined to be square. Flowers about four inches long, blood red, yellow at base. Very handsome species.

B. capreolata. CROSS VINE. Eastern U. S. Very strong climber. Leaflets elongated, heart-shaped, edges not cut. Flowers yellowish red. Perfectly hardy.

B. speciosa. Argentina. Leaflets glossy. Flowers lilac and yellow inside the tube, but lavender on the flaring lobes. Free bloomer.



Bignonia venusta

BIGNONIA-Continued

B. tweediana. Argentina. Leaflets long and narrow. Flowers lemon-yellow and usually broader than long. The vine itself is very graceful and handsome and will climb very high. The tendrils are hooked and adhere readily to brick, stone, cement and wood.

B. venusta. Brazil. Leaflets in threes, dark green, somewhat glossy. Flowers are about three inches long, tubular, in large and numerous clusters; bright orange. Blooms during the winter and early spring. Slightly tender until well established. Where it will thrive it is one of the most gorgeous flowering vines.

BOUGAINVILLEA!

Very showy evergreen climbers from South America, with insignificant real flowers surrounded by three very showy bracts appearing like flowers and usually so called.

B. glabra sanderiana. Leaves small, dark green. Flowers dark magenta and slightly smaller than those of B. spectabilis.

B. glabra variegata (B. "Wm. K. Harris"). Very handsome variety. Leaves are freely and brilliantly variegated with creamy white. The effect is very striking.

B. spectabilis. Leaves large, bright green. Flowers brilliant rosy magenta. Wonderfully free bloomer and one of the showiest plants in cultivation.

B. spectabilis lateritia. While considered a variety of the foregoing it is absolutely distinct. The leaves and shoots are very downy; the flowers are usually called brick red when grown outside, but occasionally verge on a deep wine color. Grown under glass they are a beautiful salmon rose. There is nothing more difficult to propagate, so that plants are always very scarce and high priced. Will stand but very little frost.

CISSUS

C. striata (Ampelopsis sempervirens). EVER-GREEN AMPELOPSIS. Very handsome vine of much more dainty appearance than the deciduous kinds. Leaves small, palmate, with five dark green leaflets. Adheres by tendrils. Rare, but well liked where known.

CLEMATIS

Well-known deciduous climbers clinging by their twining leafstalks. Flowers vary greatly in size, color and time of blooming. Perfectly hardy here. They require rich, light soil, plenty of moisture with good drainage.

C. montana. Himalaya Mts. A great favorite in California. Flowers fragrant, rather small, four sepals, almost pure white. Strong grower. Blooms very early in the spring.

C. montana rubens. A beautiful variety. Growth and habit identical with type, but flowers are deep pink in bud, lightening to blush as they open.

C. paniculata. Japan. Flowers white, fragrant, very small, but borne in the greatest profusion during late summer.

LARGE-FLOWERING VARIETIES

Duchess of Edinburg. Medium-sized, pure white, very double, fragrant.

Henryi. Extremely large, almost pure white. Single.



Clematis montana



CLEMATIS: LARGE-FLOWERING TYPE See page 62

Jackmanni. Single, medium-sized; intense viot purple. A very free bloomer and the most opular variety grown. let purple. popular

Jackmanni Rubra. Differs from type in having light wine-colored flowers.

Ramona. Very large. A beautiful shade of clear, light blue.

CLIANTHUS

C. puniceus. PARROT'S BILL. New Zealand. Evergreen half-climber. Leaves pinnate with about twenty small leaflets. Flowers brilliant red, long and curved to a point, accounting for the common

C. puniceus albus. A variety of preceding with white flowers. Otherwise identical with type.

DECUMARIA

D. barbara. CLIMBING SNOWBALL. S. E. United States. Deciduous vine, climbing by rootlets like Ivy. Foliage handsome and glossy. Bears fragrant, small, white flowers in feathery clusters during early summer.

DOLICHOS

D. lignosus. AUSTRALIAN PEA VINE. Handsome and popular climber. Leaves of three broad and pointed leaflets. Bears a profusion of fragrant, purplish rose flowers in upright racemes, greatly resembling miniature Sweet Peas. Blooms from late winter to midsummer.

late winter to midsummer.

D. lignosus a'bus. Identical with type except that

EPHEDRA

E. altissima. N. Africa. Curious plant; practically leafless, with very numerous, long, slender, green, jointed branches like those of Equisetum or Casuarina. Flowers inconspicuous, berries scarlet. Quite unlike any other climber.

FICUS: Fig

F. pumila (F. repens). CLIMBING FIG. Extremely handsome evergreen climber with about same habit as the well-known Boston or Japan Ivy. It adheres closely to walls by its clinging tendrils.

Leaves are small, dark green and heart-shaped. Has been proved perfectly hardy here by several years' test on our office building, where it has thrived admirably.

F. pumilia minima. A variety of short, compact growth with tiny leaves. Useful to climb to a very low height and excellent for hanging baskets, window boxes, etc.

HARDENBERGIA

Very handsome Australian, evergreen, twining vines. The flowers are pea-shaped, small and dainty, borne in very numerous elongated, compact clusters during late winter and early spring. Rank very high among the best winter-blooming climbers. Often wrongly called Kennedya, which is quite distinct.

H. comptoniana. Leaves of three or five leaflets. Flowers deep, intense violet. We know of no other climber that can approach it in color. Remarkably

H. monophylla. Leaves undivided. Flowers pink, in utmost profusion.

HEDERA: Ivy

While many plants are called "Ivy," the name really belongs to this genus. Evergreen climbers doing well in shaded locations. They cling by aerial rootlets.

aerial rootlets.

H. helix, ENGLISH IVY. Europe; Africa; Asia. The well-known species with very dark green, leathery leaves, usually about five-lobed. Old vines have greenish flowers and black berries in clusters on lower part of plant.

H. helix variegata. VARIEGATED ENGLISH IVY. Center of leaves light and dark green, margin creamy, vellow.

creamy yellow.



Jasminum grandistorum CATALONIAN JASMINE See page 64

HIBBERTIA

H. volubilis. Australia. Twining vine with large, evergreen leaves and curiously formed, yellow flowers. Of unusual appearance and very rare.

HOYA

H. carnosa. WAX PLANT. Beautiful climber of moderate growth, with large, smooth, glossy, deep green leaves. Flowers white with pink center, fragrant.

HUMULUS: Hop

H. lupulus. COMMON HOP VINE. Europe and N. America. Herbaceous perennial vine of extremely rapid growth. Leaves large, rough and Useful for temporary, quick effects.

IPOMEA

I. mexicana. This name is applied to many different plants. Ours is a herbaceous perennial from a tuberous root. Leaves very deeply seven-lobed, the lobes long and narrow. Flowers large, shaped like Morning Glory, deep purple. Growth very strong. Tubers become enormous with age.

JASMINUM: Jasmine; Jessamine

Twining vines with white or yellow flowers, most of which are very fragrant.

- J. azoricum. Growth rather compact. Foliage very dark green and glossy. Leaves of three small leaflets. Flowers in dense clusters, purest white, fragrant. In bloom most of the time. Evergreen. One of the handsomest.
- J. gracillimum. Borneo. Moderate climber. Branches and leaves downy. The latter are simple, small and pointed. Flowers large, fragrant and pure white. The five calyx teeth are long and slender, remaining at ends of branchlets in odd-looking tufts after flowers have fallen. Evergreen.



Jasminum primulinum
Double Yellow Jasmine



Muchlenbeckia complexa Maiden Hair Vine, etc. See page 65

- J. grandiflorum. CATALONIAN JASMINE. India. Pinnate leaves. Flowers pink in bud, white when open, very large and double, delightfully fragrant. Blooms most of the time. Evergreen.
- J. humile (J. revolutum). ITALIAN YELLOW JASMINE. Asia. Strong grower. Pinnate leaves. Leaflets slender and pointed. Flowers bright yellow in open clusters. Evergreen. Very fine.
- J. ligustrifolium. India. Densely branched and of compact growth. Leaves light, glossy green, almost exactly the shape of those of Privet and closely resembling them. Flowers creamy white, intensely fragrant, borne profusely during spring and summer. Evergreen.
- J. nitidum. Remarkable for the size and shape of the flowers, which are often over an inch and a half broad and have about ten long, pointed segments instead of the usual five. Branches very slender and twining. Leaves glistening, not divided, long and very narrow. Quite unique among the other jasmines. Evergreen.
- J. nudiflorum (J. sieboldianum). China. Leaves of three very small leaflets. Flowers yellow, not in clusters, produced freely during winter. Deciduous. Especially handsome in early spring when covered with bright yellow flowers before leaves appear.
- J. officinale. JESSAMINE; COMMON JASMINE. Persia; India. Slender vine with finely divided pinnate leaves and numerous small, white, fragrant flowers. Summer bloomer. Partly evergreen.
- J. primulinum. DOUBLE YELLOW JASMINE. China. A recent and very valuable introduction. It is not only the fastest growing Jasmine, but almost the quickest growing climber in our entire list. Leaves of three good-sized leaflets. Fiowers clear primrose yellow, very large and usually double. Evergreen.

LONICERA: Honevsuckle

Popular free-blooming, twining vines. The following sorts are all evergreen in this climate.

L. japonica chinensis. CHINESE HONEY-SUCKLE. Growth extremely strong. Old leaves dull green. New growth is reddish purple on branches and backs of leaves. Flowers white inside, purplish outside. One of the very best vines where very rapid growth and a dense mass of foliage are desired.

L. japonica halliana. JAPANESE HONEY-SUCKLE. Habit exactly like Chinese; growth equally strong and dense. Leaves are bright green above, grayish green below, not at all purplish. Flowers white, changing to yellow. Very fragrant.

L. sempervirens fuchsioides. FUCHSIA-FLOW-ERING HONEYSUCKLE. Very handsome vine of moderate growth. Leaves large, silvery beneath. Flowers are extremely showy, large and borne in good-sized clusters, red outside, orange within.

MANDEVILLA

M. suaveolens. CHILE JASMINE. Deciduous vine, bearing white flowers shaped like Jasmine, but far larger and even more fragrant. Remarkable for the long seed pods in pairs, joined at the tips. Summer bloomer.

MILLETTIA

MILLETTIA

M. megasperma (Wistarla megasperma). EVERGREEN WISTARIA. Australia. The most valuable novelty in Climbing Plants for many years. A genuine Wistaria in every respect save for slight botanical characteristics of the pod. Entirely evergreen and a vigorous grower. Leaves have from 7 to 13 dark green, glossy and somewhat leathery leaflets, about two inches long. Flowers are borne in terminal panicles nearly two feet long, composed of numerous racemes from 4 to 6 inches in length. The color is a rosy purple, becoming nearly white. The "standard" of the flower is marked with a green, vertical band. Comes into bloom about the end of February and is in flower over a longer period than the deciduous Wistarias. The flowers are followed by pods whose appearance is almost equally striking. They are six or seven inches long and very thick, light green, covered with a dense coat of silvery down. We believe this is the first description published in this country and have made it from our blooming specimen plant.



Passiflora. Passion Vine



Plumbago capensis See page 66 In Urn: Phoenix humilis loureiri See page 72

MUEHLENBECKIA

M. complexa. WIRE VINE; TASMANIAN IVY; MAIDEN HAIR VINE; MATTRESS VINE; MONEY VINE, etc. New Zealand. Remarkably stronggrowing, evergreen, twining vine. The innumerable branches are very slender and black, resembling wire. Leaves about the size of Maiden Hair Fern. Flowers white, but entirely inconspicuous. Splendid for training up trunks of trees. If grown on "chicken wire" will make a very beautiful hedge, as the branches intertwine until a dense mass is formed.

PASSIFLORA: Passion Vine

A genus of rapid-growing, twining vines valued for their very curiously formed flowers and particularly useful for quick effect. The "corona" mentioned in descriptions is the circle of fringelike filaments above the petals. All listed here are evergreen. For other Passion Vines see Tacsonia.

P. alato-caerulea (P. pfordti). Leaves very large, three-lobed, purple-veined below. Flowers white, tinted rose inside. Corona dark purple at base, bluish purple in middle, white at tip.

P. caerulea. Brazil. Growth very strong. Leaves deeply five to seven lobed. Flowers greenish white. Corona purple at base, white in middle, blue at ends. Produces orange yellow, egg-shaped fruit in great abundance.

P. colvillei. Growth similar to preceding. Leaves three to five lobed. Flowers large, light purple, very profuse. Corona purple at base. variegated white and blue at ends. Bears no fruit.

P. edulis. Brazil. Leaves medium-sized, glossy, more or less three-lobed. Flowers white with light purple corona banded at the center. Fruit about two inches long and nearly as thick, with a hard, purple rind. Pulp yellow, edible, with a very agreeable, sprightly flavor.



Tecoma australis. Wonga Wonga Vine See page 67

PASSIFLORA: Passion Vine - Continued

PASSIFLORA: Passion vine - Continued

P. ligularis. Peru. Vine of moderate growth, woody on main trunk and branches, but with soft, glaucous shoots. Leaves very large, entire, elongated heart-shaped and acuminate, sometimes eight inches long. Leafstalks long, with about six thread-like glands. Flowers greenish white; corona white with ruddy purple zones. Fruit large, yellow and edible.

P. violacea. Brazil. Tall growing. Leaves with three long, narrow lobes, slightly glaucous beneath. Flowers about three inches wide, lilac-pink. Co-rona white tipped and barred with violet and white.

PHASEOLUS

P. caracalla. SNAIL VINE; CORKSCREW FLOWER. Asia. Twining vine. Leaves of three pointed leaflets. Flowers very fragrant, large, purple and yellow, bean-shaped, with the keel curiously coiled like a snail shell. The unique form of the flowers never fails to attract attention.

PITHECOCTENIUM

P. clematideum (Bignonia alba). Argentina. Handsome climber with trumpet-shaped, pure white flowers. Climbs by tendrils. Greatly resembles the Bignonias, to which it is closely related.

PLUMBAGO

Very useful vines or can be grown as spreading shrubs. Foliage clean and smooth. Flowers shaped like Phlox with very long tube. Borne in racemes throughout the season. Very free bloomers

P. capensis. S. Africa. Flowers a very uncommon shade of azure blue. Almost unique in color.
P. capensis alba. A variety of preceding with pure white flowers. Seems to be even more free flowering than the blue.

SOLANUM

Handsome, evergreen, twining climbers with flowers formed like those of potato or tomato.

S. jasminoides. POTATO VINE. S. America. Well-known vine of strong and rapid growth. Leaves small. Flowers white, star-shaped, in numerous clusters. Blooms here throughout the year. S. rantonneti. Argentina. Low climber or can be grown as a shrub. Leaves ovate, entire. Flowers large, violet blue, in small clusters. Fruit red, wearly as inch in dismetel.

nearly an inch in diameter.

salvan inch in diameter.

S. seaforthianum (S. azureum). Brazil. Habit and general appearance much like that of S. jasminoides save for the leaves, which are variable, usually pinnate up to seven leaflets, and the color of the flowers, which is a beautiful azure blue. It is not quite such a rampant grower. Very hand-

SOLLYA

S. heterophylla. AUSTRALIAN BLUEBELL. Low evergreen climber. Leaves variable but not lobed or cut. Flowers numerous and very hand-some, brilliant blue, about half an inch long, beli-shaped. Decidedly graceful and pretty.

TACSONIA: Passion Vine

Strong-growing, twining vines almost identical with Passiflora and having flowers similarly formed but with longer tubes. (For other Passion Vines and explanation of "corona" see

T. manicata ignea. SCARLET PASSION VINE. Growth vigorous. Leaves broad, three-lobed. Flowers about four inches across, fiery scarlet, corona double, outer series blue. Tube rather short and flowers do not droop. Highly valuable for its wonderfully brilliant coloring and freedom of bloom.



Tecoma grandistora CHINESE TRUMPET VINE See page 67



Tecoma jasminoides

T. mollissima. PINK PASSION VINE. Andes Mts. Leaves deeply three-lobed, downy beneath. Flowers large, drooping, rose-colored; corona short; tube long.

TECOMA

Evergreen and deciduous climbers, very much like Bignonias. Flowers are tubular or trumpetshaped, varying considerably in size.

T. australis. WONGA-WONGA VINE. Australia. Evergreen twining vine of strong and rapid growth. Especially valuable for its beautiful, dark green, glossy foliage. Leaflets large. The small flowers are borne very profusely in early spring; creamy white with violet spots inside.

T. capensis. S. Africa. Growth moderate, Leaflets rather small and coarsely serrated. Flowers bright orange red, slender, with protruding stamens. Evergreen.

mens. Evergreen.

T. grandiflora (Bignonia grandiflora; B. chinensis). CHINESE TRUMPET VINE. Foliage similar to Common Trumpet Vine and deciduous. Flowers similarly colored, but shorter, more flaring and with much larger, spreading lobes. They are borne in a large, open panicle. Makes a beautiful display nearly all summer; far superior to the common form. Very little known, as the ordinary Tecoma radicans has so generally been sent out by nurseries under this name.

T. jasminoides. Australia. Vigorous evergreen climber. Leaflets small, pointed, dark green. Flowers large, the flaring lobes white shading to rosy pink inside the tube; borne in clusters. Blooms almost continually throughout the year. Very handsome.

T. jasminoides alba. Variety of preceding. Flowers larger and entirely white. Foliage light green.

T. radicans. COMMON TRUMPET VINE. Deciduous climber of strong growth. Leaflets large. Flowers very long. Tube orange yellow, spreading lobes orange red or scarlet, borne in compact, terminal clusters.

T. ricasolina (T. mackeni). S. Africa. Evergreen climber. Leaflets dark green above, pale beneath. Flowers large, borne in clusters, light pink, striped red.

T. smithi. GARDEN HYBRID. Hardly a climber, Leaflets small and numerous. Flowers mediumsized, yellow, tinged orange, borne in large panicles. Semi-evergreen.

THUNBERGIA

T. coccinea. India. Tall, freely branching, evergreen climber. Leaves variable. Flowers large, trumpet-shaped, with scarlet lobes and orange inside the throat.

TRACHELOSPERMUM

T. jasminoides (Rhynchospermum jasminoides). STAR JASMINE. China. Leaves smooth and not divided. Flowers very numerous, delightfully fragrant, creamy white, about an inch across. The five petals overlap slightly and are strongly reflexed and twisted, giving the flowers a very unique appearance. Grows slowly, but starts flowering when very small.

VITIS: Grape

V. capensis. EVERGREEN GRAPE. S. Africa. Highly prized for its beautiful, large, rounded, evergreen leaves. Vigorous grower. Will not stand much frost.



Wistaria multijuga. Japanese Wistaria See page 68



Trachelospermum jasminoides
Star Jasmine
See page 67

WISTARIA

Deciduous, twining vines of rapid and extremely strong growth. Leaves pinnate. Flowers peashaped, in long, drooping racemes in early spring. When in bloom surpass almost all other climbers in profusion and beauty of flowers. For Evergreen Wistaria see Millettia.

W. chinensis. CHINESE WISTARIA. Racemes nearly a foot long and very compact. Flowers are very light purple or nearly lavender and appear before the leaves. Very fragrant.

W. chinensis albiflora. WHITE CHINESE WISTARIA. Variety of preceding with pure white flowers. Otherwise identical.

W. chinensis flore pleno. DOUBLE-FLOWER-ING CHINESE WISTARIA. Flowers very double; purple.

W. chinensis fragrans. FRAGRANT WHITE WISTARIA. Similar to White Chinese, but flowers are intensely fragrant.

W. multijuga. JAPANESE WISTARIA. Entirely distinct from the Chinese type. Its characteristic feature is the great length of the racemes, which are often two or three and occasionally, in good specimens, nearly four feet long. Much looser than the racemes of the Chinese form. Comes into bloom about ten days later, as the leaves are appearing. Best grown on a pergola or arbor where the long racemes may hang through, giving a picturesque and charming effect.

W. multijuga alba. WHITE JAPANESE WISTARIA. Differs from type in bearing pure white flowers.

W. multijuga rosea. PINK JAPANESE WIS-TARIA. A very rare variety with plnk-tinted flowers.

W. speciosa magnifica. Blooms a week or two later than any of the others and often again in autumn. Flowers in short panicles, lllac with greenish yellow spots. Native of Eastern States.

BAMBOO

CLASS of plants combining the greatest utility with graceful beauty. In spite of common opinion there is a great diversity of form and appearance from little dwarfs only a foot or two tall to those attaining even a hundred feet in their native haunts. With greater appreciation of the individuality of different species they are steadily attaining greater and well-deserved popularity. The cut shoots of several species afford splendid material for decoration. For this purpose they should be grown in rather dry ground, as they will then keep longer without wilting after being cut. From an economic point of view the culture of the useful kinds should be encouraged, considering the almost innumerable uses to which they can be put.

Under the common term Bamboo are included Arundinaria, Bambusa, and Phyllostachys. The latter genus is easily distinguished by the canes being flattened or grooved on one side and the leaf sheaths soon falling. The other two are both characterized by perfectly round stems with more or less persistent sheaths, but cannot readily be told one from the other. These characters are not repeated in following descriptions, as they are constant and indicated by botanical names.

NOTE.—Owing to the fact that the utmost confusion exists regarding the correct names of Bamboos, and the fact that so many nurseries, both in America and abroad, have much of their stock misnamed, we have given very careful descriptions so that each species may be recognized. Excepting one or two recent importations about which there is some slight doubt, we feel certain that we have the correct nomenclature according to the best authority on the subject.

Arundinaria falconeri. Himalayas. 12 ft. This species is unique in sending up two kinds of canes; one bears flowers and seed, but not leaves: the other, leaves only. The latter are most remarkably slender, shoots 8 or 10 feet tall having only the diameter of a lead pencil at base. Leaves are slender and average four inches long, clear green. Branches several at each joint, very narrow. Very distinct in appearance.

A. hindsi. Japan. 10 ft. Of very erect but not tall growth. Shoots blue. Leaves very long, narrow and stand upright. Makes a dense thicket and is not particularly ornamental as a specimen. Fine for screens and hedges and well adapted for binding earth on banks of streams and ditches.

A. japonica (Bambusa metake). ARROW BAMBOO. Japan. 10 ft. Notable among the Arundinarias for its very large leaves, sometimes as much as a foot long and two inches wide. Canes slender and very erect, almost completely covered with the overlapping sheaths, which are slightly bristly. Very ornamental and has economic value. When well established, yields an abundance of straight, strong canes of great value to florists and gardeners.

strong canes of great value to florists and gardeners.

A. simoni. Asia. 20 ft. At first of rather low growth, but as clumps attain strength the canes increase in height until maturity. Leaves are very long, rather slender and sometimes striped white. The back of the leaf is peculiarly colored; three-quarters glaucous, one-quarter green, divided lengthwise. Canes very useful for light stakes.

Bambusa auree-striata (B. "Alphonse Karri"). Japan. 10 ft. Very distinct. The canes are at first pink, later changing to yellow, but always conspicuously striped lengthwise with green bands. Branches very numerous at joints, almost verticillate. Leaves are small and sometimes striped, arranged in two rows.

ranged in two rows.

B. fastuosa. 20 ft. Magnificent Bamboo of extremely strong and erect growth. When plants are well established the canes spring up straight as spears; when sheaths fall the canes are deep green, with very heavy, glaucous bloom; this color later changes to purple, then gradually ripens, where exposed to sun, into a beautiful, polished mahogany-brown. Entirely different from other sorts. The branches are numerous, stiff and very short. Leaves dark green with yellow blotches when old; large on ends of canes, much smaller on branches. The falling leaf sheaths are particularly beautiful, being as smooth as glass inside and stained brilliant purple.



Phyllostachys quilioi See page 70

B. palmata. Japan. 8 ft. Remarkable for its very large leaves, often over a foot long and three or four inches broad. Canes usually three to five feet, but sometimes taller; rather stout. Entirely distinct in appearance.

BAMBOO (Bambusa)-Continued

B. vittata-argentea (B. verticillata). 12 ft. Named from the white-striped leaves. The canes are slender, with numerous fine branches at each joint and when weighted down with the profuse foliage are bent almost to the ground. The leaves are about two inches long, dark green striped white and arranged in two rows (distichous) all along the branches.

Phyllostachys aurea. Japan. 15 ft. Named from its golden yellow canes; but this character is found in several others. Can be recognized by the joints being close together at base of canes. Shoots come up densely, most of them being very slender and of moderate height. Leaves two to four inches long. Furnishes excellent decorative material.

Purnisnes excellent decorative material.

P. boryana. 10 ft. Remarkably graceful species for possibly variety) of moderate growth here, but evidently more vigorous in its native country. The canes are very strongly arched. The leaves are uniformly small, on slender branchlets closely appressed to the branches. The canes are dark green at first, but change to greenish yellow, more or less blotched with brown spots. They are always rough to the touch on account of a dense coat of very minute but evident down. Said by some to be a variety of P. nigra, but is of far more graceful habit, with branches much longer in proportion to canes, which are totally different in color. Ranks with P. henonis as the most graceful of the Phyllostachys group.

P. castillonis major. 20 ft. We received this variety from Japan for P. castillonis, which is a species of much smaller growth, with both canes and leaves striped. This variety is very similar to P. quilioi in growth, but does not attain the same height. Mature canes are a beautiful, rich yellow except on the flattened or grooved side, where they are clear green. Rarely a green stripe will appear on rounded portion. As the grooves of successive internodes are on opposite sides, the effect is very striking. Leaves are almost always clear green; very rarely one will show stripes. The sheaths are beautiful in their early stages, colored violet, striped pink and yellow. Altogether this is a remarkably fine decorative variety.

P. henonis. Japan. 20 ft. Hardy and handsome species, considered by some authorities the most

beautiful of all hardy Bamboos. Canes are bright green with a distinct white ring below joints, slightly rough to the touch. The flattened side of stem has double grooves. Leaves are small and very uniform in size. The feathery foliage, borne on canes which arch gracefully near the top, forms a charming picture.

P. marliacea. WRINKLED BAMBOO. Garden hybrid. Remarkable for the zigzag growth of the lower part of the canes and for their grooved or wrinkled surface. The canes are very rich green, as usual turning slightly yellow. Leaves intense green above, pale or glaucous below, three or four inches long. Growth strong and vigorous; general appearance graceful. Very hardy. Quite rare.

P. nigra. BLACK BAMBOO. China; Japan. 20 ft. Named from its distinctive feature, the black canes, which are green when first produced, but soon change. The growth is mainly erect, but slightly arching near top. Leaves rather small. The contrast between the bright foliage and glossy black canes is very striking indeed.

black canes is very striking indeed.

P. quilioi. 40 ft. Our strongest growing, tallest and possibly hardiest Bamboo. Probably the species most likely to prove of greatest economic value. Growth is very rapid and mainly erect. Leaves very variable, sometimes up to a foot long by two inches broad, but mainly from three to six inches long. Canes shiny green, changing to clear yellow and possessing great strength when seasoned. Furnishes fine decorative material. Ought to be widely planted in California from an economic as well as esthetic point of view.

ARUNDO

A. donax. GIANT REED. Orient; S. Europe. 15 ft. Not a Bamboo, but a woody plant of near relationship and somewhat similar general appearance. Canes are unbranched and bear large, sage green leaves from top to bottom. Spreads from roots and forms clumps. Good windbreak. Far hardier than any of the Bamboos, hence can be used to excellent advantage where they are too tender.

A. donax variegata. 8 ft. Handsome variety of preceding. Grows about half as tall. Leaves conspicuously marked with broad, creamy white bands running lengthwise. Highly ornamental.



Wistaria chinensis. Chinese Wistaria
See page 68

PALMS

HE hardy Palms undoubtedly constitute the chief glory of our Californian vegetation and go further toward creating and maintaining the semi-tropical appearance than any other class of trees or plants. Owing to great diversity in growth and habit, they can be used in many different localities for a variety of purposes. For street planting we particularly recommend Trachycarpus excelsus and T. nepalensis, as their trunks are very small and require almost no space. It should be remembered that palms can be transplanted safely no matter how large or old, if properly done.

CHAMAEROPS

Includes only the European Dwarf Fan Palm. The Japanese Fan Palms will be found under Trachycarpus. The former have long spines on the leafstalk; the latter have none.

C. humilis. DWARF FAN PALM. Mediterranean region. 20 ft. Dwarf, hardy Palm of extremely slow growth. Leaves very small with spiny stalks, segments rigid and double-pointed. A very useful Palm for a small lawn. Fine for tub culture. Handsome and requires but little space.

C. humilis argentea. Variety of preceding and identical except that the dark green leaves are very silvery on lower surface. When the young leaves are first expanding, this surface faces outward, contrasting finely with the older leaves.

COCOS

Genus of very graceful Palms, including the Coconut. There is considerable variation in habit and appearance, but all have pinnate leaves. The first three species listed compose the "australis" type, all very hardy and of comparatively dwarf growth, with recurved leaves; the last three are in the "plumosa" group, of very erect growth and have long, nearly erect, plumy leaves. Names are as they are understood in California

and probably do not correspond with botanical names.

C. australis (C. eriospatha). 12 ft. Remarkably handsome and graceful Palm. Leaves are strongly arched and even recurved. Often all the leaves on a plant are similarly bent to one side while arching, giving a unique and striking spiral effect to the whole Palm. Leaf segments very long, narrow, sage green and more or less glaucous. Forms practically no trunk, at least not for many years. Splendid for lawn planting, as it will not grow out of all bounds and overshadow everything else as the Date Palm often does. It is thoroughly hardy planted. Cannot be recommended too highly.

C. bonneti. Generally similar to preceding, but very glaucous. Equally hardy and desirable.

C. campestris. Another similar and hardy kind. Leaves gracefully recurved, but rather rigid.

C. datil. Belongs to the tall, erect-growing "plumosa" type and is by far the hardiest kind in that section. It is even more slender and graceful than C. plumosa. It is unfortunate that this section of the State is practically without specimens of this type of palm, which adds so much to the region from Santa Barbara south. This is doubtless due to the susceptibility to frost of C. plumosa, but, with this hardier form available, there is no good reason why this condition should not be obvi-



Our Office Building: On Lawn, Cocos australis



Phoenix canariensis
Ornamental Date Palm

COCOS-Continued

C. flexuosa. Another of the "plumosa" type. Generally similar to C. plumosa, but leaf segments are more numerous and slender, while the trunk has a wavy outline. It is also considerably hardier.

C. plumosa. Well known from Santa Barbara south. Forms tall, slender trunk with large, erect and spreading, finely divided, plumy leaves. Probably too tender for this part of the State unless planted in a very protected spot.

ERYTHEA

Fan-leaved Palms. Leaves very large, on long, stout stalks. Filaments very few. Quite hardy.

E. armata. BLUE PALM. Lower California, 40 ft. Leaves are extremely glaucous, giving the plant a silvery blue hue. Leafstalks armed with curving spines. Extremely showy and entirely distinct from other palms. Growth comparatively slow. Rather difficult to transplant, so that it is safer to use established plants.

E. edulis. GUADALUPE ISLAND PALM. 30 ft. In our opinion the handsomest of the fan-leaved Palms. The leaves, borne on very long stalks, are extremely large and hold their color for many years, so that even on plants ten or fifteen years old the lower leaves, still green, will touch the ground. Blooms comparatively young and bears large, blackskinned nuts.

E. elegans. Moderately hardy Palm of very slow growth in this climate. Leaves fan-shaped, at first glaucous and plaited, but when older becoming green and almost flat. Filaments few or none. Leafstalks slender, with margins sometimes spiny, again unarmed. Introduced by us many years ago, but is extremely rare.

HOWEA (Kentia)

By far the most popular Palms for indoor culture and decoration. They are of slow growth and can be maintained almost indefinitely in pots or tubs. Pinnate-leaved.

H. forsteriana. The most satisfactory Kentia for general use as a house plant. It is hardier, lasts longer and thrives at a lower temperature than H. belmoreana, which we have discarded in favor of this.

JUBAEA

J. spectabilis. WINE PALM. Chile. 50 ft. Very hardy, pinnate-leaved Palm. Leaves much like Phoenix, which it slightly resembles when young. When older it forms a very thick, gray trunk, which is perfectly smooth, as the leaves do not adhere as in most Palms. Rather rare. A good-sized specimen never fails to attract attention and interest.

LIVISTONA (Corvpha)

L. australis (Corypha australis). Australia, Fan-leaved Palm with segments cut nearly to the leafstalk, which is very long. Handsome as a pot plant and in the open ground when young.

PHOENIX

Most kinds are called "Date Palms." Habit and growth are varied, but all have pinnate leaves

P. canariensis. CANARY ISLAND DATE PALM; ORNAMENTAL DATE PALM. 50 ft. The most widely planted Palm in California. Known everywhere and to all. Its ultimate great size should be remembered when planting so as to allow enough room for development. Unless there is plenty of space a small Palm such as Cocos australis should be used instead. Like all other Palms, its growth is at first exceedingly slow, but from the time it is two or three feet tall it will grow very rapidly if in good soil and given an abundance of water. Very hardy.

P. dactylifera. TRUE DATE PALM. N. Africa. 100 ft. This species bears the true edible dates, which mature in some parts of the State. Similar to P. canariensis in a general way, but trunk is much more slender, leaves coarser, glaucous and more upright.

P. humilis loureirl (P. roebelini). PYGMY DATE PALM. S. E. Asia. 5 ft. A remarkably beautiful and graceful little Palm. Somewhat like a miniature Ornamental Date Palm. Leaves and leaflets droop gracefully. The latter are very slender. Highly desirable as a pot plant, being quite different from the general run of potted Palms. It is moderately hardy and can be planted out in sheltered locations.

P. reclinata. S. Africa. 30 ft. Very graceful species. Trunk very slender. Leaves shorter than P. canariensis, with yellow spines at base; stalk and midribs light yellow, segments light green. The leaves are strongly curved so as to arch gracefully, and usually stand almost edgewise. Thrives best in warm localities.

RHOPALOSTYLIS (Areca)

R. bauerl (Areca bauerl). Handsome, pinnate-leaved Palm suitable for pot culture. Rendered very distinct by its black leafstalks. Otherwise similar to the Kentias.

SABAL

American genus of fan-leaved Palms. Some are dwarf, the leaves always springing from the surface of the ground; others have a very tall trunk in their habitat, but even the latter seem to remain practically dwarf with us.

S. blackburnianum. West Indies. Said to grow thirty to forty feet high. Has large, glaucous, stiff leaves. Grows slowly here.

S. ghiesbreghti. Very similar to S. umbraculif-erum.

S. macrophyllum. Of low growth with very large leaves.

S. mexicanum. Texas and Mexico. 40 ft. Similar to S. palmetto, but with stouter trunk and larger leaves. The latter are rounded, cut about to the middle and have threads on margins of segments. Said to be of more rapid growth than S. palmetto.

S, palmetto. CABBAGE PALMETTO. Southern U. S. 50 ft. The noted Florida Palmetto. Leaves very large, somewhat heart-shaped, segments deeply cut. Grows very tall in Southeastern States. Dwarf here.

S. umbraculiferum. The tallest known Sabal, probably a variety of S. blackburnianum. Leaves are very large, drooping, on long stems. Perfectly hardy.

TRACHYCARPUS (Chamaerops)

Asiatic fan Palms, known by the dense, black, hairy covering of the slender trunks. Often listed as Chamaerops, from which they are distinguished by the lack of spines on the leafstalks. They are all extremely hardy, enduring more cold than any other genus of Palm.

T. excelsus (Chamaerops excelsa). WINDMILL PALM. Asia. 30 ft. Trunk slim and very hairy; in old specimens thicker at the top than at the base. Leaf segments are narrow and flexible; the outer third usually droops on older leaves. An excellent species for street planting. Hardiest Palm known.

T. fortunei. Although similar to preceding, it is nevertheless distinct. Trunk is stouter and tapers upward. Growth is slower. Leaves are larger with broader segments, more closely set; very glaucous beneath. Very handsome.

T. nepalensis. Himalayas. Trunk and general appearance similar to T. excelsus, but the leaves are darker, smaller and borne on shorter stalks; segments extremely rigid and never drooping. The best for very windy situations, as the leaves will not whip to pieces.

WASHINGTONIA

Fan-leaved Palms of tall growth, native to California and Northern Mexico. Leaves plaited; leafstalks almost always very spiny. Of very vigorous growth if properly planted and cared for.

The utmost confusion has existed as to the species of this genus and their correct names. As in our last edition, we have adopted those published in an article by S. B. Parish in the *Botanical Gazette* of December, 1907, which satisfactorily accounts for all the species and varieties known at present.

known at present.

W. filifera robusta. CALIFORNIA FAN PALM; COLORADO DESERT PALM. 80 ft. This is our native Fan Palm, growing naturally in the desert region of Southern California. It is probably by far the most common fan-leaved Palm cultivated in the State, although of late years W. gracilis has been planted more extensively. It has almost invariably been known as Washingtonia filifera or Pritchardia filifera, but according to best authority the above name, W. filifera robusta, is correct. The trunk is very stout, likely to be noticeably thicker a few inches above than at surface of ground. The leafstalks are very thick, broad and rather long and are armed on margins with stout, curved spines from base to leaf blade. (The true W. filifera has no spines on the portion of the stalk toward the leaf.) Leaves are very large, light or yellowish green and marked with numerous small, dark green spots. Leaf segments are profusely furnished with curling filaments or threads. Although it is customary to remove the dead leaves each year, the appearance of the older plants is far more striking and characteristic when these are allowed to remain.

are allowed to remain.

W. gracilis. Lower California. 80 ft. This is the species that has been known in Southern California as Washingtonia robusta and in Northern California as Washingtonia sonorae. The trunk is much more slender than the preceding variety. Grows much faster. Leafstalks are much shorter and vary at base from dark brown to nearly black. Spines about the same. Leaves are clear, deep green, without the spots of preceding and are cleft only about half as deeply. They show a decided tendency to "buckle" instead of having an approximately level surface. Filaments are sparingly present in young plants, but are few or often entirely absent on older ones, particularly after the leaves are fully developed. Under certain conditions,

Palms of this species make a remarkable growth, attaining 60 to 80 ft., while the trunk has a uniform diameter of not much over a foot except for the bulge at the base. Under other conditions, where growth is not so vigorous, the trunk shows an elongated, conical outline. For general purposes this is probably the most satisfactory tall-growing, fan-leaved Palm.

this is probably the most satisfactory tall-growing, fan-leaved Palm.

W. sonorae. Sonora and Lower California. This is not the species that has generally been called by this name in Northern California. The Palms so called really belong to the preceding species. There are probably no fully grown specimens in the State, but from appearance of young plants and also from reports and photographs of those growing naturally in Lower California, it will unquestionably prove very valuable. It is apparently more closely related to W. gracilis than to W. filifera robusta. From the former (W. gracilis) it is easily distinguished by the great profusion of filaments on the leaves; leafstalks tapering abruptly, instead of gradually, into the leaves; narrower leaf segments, hence shallower plaits. The leaves are larger, softer and more flexible; are cut far more deeply and never show any tendency to "buckle," always having a surface perfectly level or very slightly concave above. On the upper surface of fully developed leaves the filaments show a tendency to form a distinct ring, following the bases of the clefts between the segments. The rate of growth is very nearly the same as W. gracilis, but if anything is a little more rapid. At present this species is very rare. We have no hesitancy in recommending it as a decided acquisition to the list of hardy and rapid-growing Palms. The plants we offer were grown from seeds taken from the native trees in Mexico.



Washingtonia filifera robusta California Fan Palm

AGAVES, DRACAENAS, ETC.

GROUP of trees and plants of very tropical appearance. The Dracaenas (Cordyline) are the only ones making real trees. The others are plants of low growth, throwing up elongated flower stalks.

AGAVE

Plants usually without any trunk, but with tall flower stalks. Leaves fleshy, bearing spines on margins and at tips.

A. americana. CENTURY PLANT. Tropical America. The well-known "Century Plant." Leaves are bluish gray. Has an enormous flower stalk, often over twenty feet tall, panieled toward top. Dies after blooming. (See cut on cover.)

A. americana variegata. Variety of preceding with two forms. Habit the same, but leaves are either green with broad, yellow margins or very glaucous with creamy margins. Very striking.

A. atrovirens. Leaves stout, dull green, standing almost erect, curving outward toward end, but the long, terminal spine stands vertical. Margins have stout teeth. Ultimately becomes a very large plant.

A. caerulescens. Compact and dwarf. Leaves one or two feet long and very slender; quite glaucous or blue. Margins armed with short, gray spines. Excellent for small space.

A. ferox. Leaves extremely broad in proportion to length and very stout, dark green, sometimes glaucous. Marginal and terminal spines are stout and dull red. Unique and striking.

A. potatorum. Very similar to A. atrovirens. Leaves slightly broader, with long, tapering point; dull glaucous green. From this species the Mexicans obtain Pulque.

A. stricta (Bonapartea hystrix). Interesting little plant, growing a foot or two tall, with triangular, fleshy, sage green leaves. Throws up a slender flower stalk about 8 ft. tall.

A. stricta glauca (Bonapartea hystrix glauca). Identical except that leaves are very silvery.

CORDYLINE (Dracaena)

C. australis (Dracaena australis; D. indivisa), New Zealand 30 ft. Tropical looking trees with sword-shaped leaves and very large panicles of white flowers. Often called "Dracaena Palm," which is incorrect, as they are far from Palms and really closely related to the Lilies, as the flowers will show. Next to the Palms, they are probably our most tropical looking trees.

This runs into forms with broad and narrow leaves. The former usually branches lower and does not make so tall a tree as the latter, which usually makes a very tall, slender trunk. When ordering, it is best to specify which form is preferred.



Cordyline australis. DRACAENA

DASYLIRION

Very ornamental desert plants with either very short trunks or none at all. Leaves very long, straight and slender, usually spiny and toothed on edges. Flowers in very tall, dense spikes. Their whole appearance is novel, attractive and interesting. Require no care.

D. acrotrichum (D. gracile). Mexico. Habit and general appearance similar to following, but leaves

are clear green.

D. glaucophyllum. Mexico. Trunk short if any. Leaves very glaucous; numerous, standing almost rigid in all directions, about two or three feet long and an inch broad. Margins armed with numerous small, spiny teeth. Flower spike about 8 ft tall.

small, spiny teeth. Flower spike about 8 ft tall.

D. parryi. Leaves very slender, long and narrow, often strongly twisted, rough on both sides and minutely serrate, finely striped white and green.

D. quadrangulatum. Mexico. Very distinct and handsome. Leaves about a third of an inch in diameter and four to six feet long when fully developed; four-angled, edges rough but not spiny; extremely numerous and usually stand almost perfectly straight in all directions. Flower stalk about 15 feet tall. Very fine.

D. serratifolium. Mexico. Very similar to D.

D. serratifolium. Mexico. Very similar to D. gracile. Leaves are longer and more recurving.

NOLINA

General appearance much the same as Dasylirion; in fact, are only distinguished botanically.

N. beldingi. Lower California. Ultimately becomes a tree eight or ten feet high. Leaves striated, glaucous, about a yard long, nearly an inch wide, flat, thin and tapering to a point; minutely and sharply serrate, mostly twisted. Center leaves form a compact bundle.

N. longifolia. Mexico. In time forms a trunk five or six feet tall. Leaves much like preceding, not glaucous, about an inch or more wide; older ones very drooping. Center leaves loose and slightly spiral, usually forming a tube. Decidedly handsome.

YUCCA

Desert plants with spiny-pointed leaves. White flowers like lilies are borne in large, branching panicles on a stalk rising considerably above the

Y. aloifolia rubra. Forms a tall trunk. Leaves stout and rigid with extremely sharp, terminal spine. Yellowish green, becoming strongly tinged with red on surface toward the sun. Flowers tinged purple outside.

Y. aloifolia variegata. Habit same as preceding. Leaves striped light and dark green with yellow margins, minutely toothed, red at tip.



Dasylirion quadrangulatum

Y. gloriosa recurvifolia (Y. pendula). Forms a short trunk. Leaves long, slightly glaucous, gracefully drooping; smooth on upper surface, rough on lower. Flowers green in bud, white when fully opened. An excellent tub plant.

Y. whipplei. SPANISH BAYONET. Southern California. Forms no trunk whatever, but sends up a tall, slim, panicled flower stalk. Leaves narrow, stiff, glaucous and without threads. Very handsome in bloom.

FERNS AND MOSSES

UR collection is limited to the few sorts that have proved eminently satisfactory and desirable under average conditions. For so-called "Asparagus Ferns" see Asparagus in next

ADIANTUM: Maiden Hair Fern

Among the best known and liked ferns are the graceful Maiden Hair, so called from their fine, black leafstalks.

A. capillus-veneris imbricatum. VENUS-HAIR FERN. An uncommon and very beautiful form. The fronds are ample; leaflets large, noticeably lobed and so closely placed as to overlap each other Remarkably beautiful. Very rare yet the easies of the Adiantums to grow successfully. vet the easiest

A. cuneatum. Brazil. The best known and most commonly cultivated Adiantum. Fronds very long and finely divided. Leaflets rather small.

A. cuneatum gracillimum. Variety of preceding with minute leaflets. Very graceful and distinct.

A. cuneatum grandiceps. Another variety having leaflets larger than in the type and long, drooping fronds heavily crested at the ends.

NEPHROLEPIS: Sword Fern

The following are all horticultural varieties of N. c.raltata, which is no longer grown in its typical form. Arranged relative to division of leaves from coarse to fine they rank as follows: N. bostoniensis, piersoni, elegantissima, whitmani, amerpoldi. N. superbissima is in a class by itself, being entirely distinct. Following trade usage, the names are condensed by omitting the word exaltata in each case.

N. amerpohli. PHILADELPHIA LACE FERN. omewhat like N. elegantissima, but even more Somewhat like N. elegantissima, but even more finely divided; fronds shorter, hence more compact, owing to its habit, this variety is particularly fine for table decoration. Easily the handsomest of the finely divided forms of the Sword Ferns.

N. bostoniensis. BOSTON SWORD FERN. Known almost universally. Fronds very long and gracefully arching. Excellent for pot culture or hanging baskets. Will grow outside if sheltered from sun, wind and frosts.

N. compacta. Fronds grow straight and orget Somewhat

N. compacta. Fronds grow straight and erect. Leaflets closely set. Good for outdoor culture. Sometimes planted on the trunks of Phoenix canariensis.

N. elegantissima. A more finely givined form. than the following. Habit more compact. Fronds shorter. About intermediate between N. amerpohli

N. piersoni. A variety of the Boston. Growing equally strong. Differs in having the leaflets again divided on most of the fronds.



Nephrolepis exaltata amerpohli PHILADELPHIA LACE FERN

N. superbissima. Entirely distinct from all the rest. Foliage is very dark green, remarkably so. Fronds comparatively short and densely covered with crowded, often twisted, leaflets. Shoots are numerous, close together and of such substance that they never fall over.

N. whitmani. Finely divided, about intermediate between N. elegantissima and N. amerpohli.

PTERIS

P. tremula. A rather coarse-growing but graceful fern. The fronds are about three feet long, nearly a foot broad and considerably divided. Being quite hardy, it is an excellent sort for planting out.

SELAGINELLA

S. emmelliana. CLUB MOSS. Handsome pot plant of low growth and fern-like appearance, particularly adapted to table decoration. Should be kept moist.

AQUATICS

CYPERUS

C. papyrus. EGYPTIAN PAPER PLANT. The plant used by the ancient Egyptians for papermaking. Stalks rise to a height of four to ten feet. At the top is a head of thread-like bracts six to eighteen inches long. Will grow either in shallow water or on almost any soil if kept well watered.

NELUMBO: Lotus

N. nucifera. EGYPTIAN LOTUS. Although universally known as Egyptian Lotus, the plant is a native of Eastern Asia. Readily distinguished from Water Lilies by the leaves standing considerably above the surface of the water and the flower stalks rising even higher than the leaves, Flowers are large and a beautiful shade of pink.

NYMPHAEA: Water Lily

Well-known plants from the Temperate Zones, bearing wonderfully symmetrical flowers, which, like the leaves, float on the surface of the water. They can readily be cultivated either in ponds or deep tubs.

N. flava. FLORIDA YELLOW WATER LILY. Flowers light yellow.

N. odorata. FRAGRANT WATER LILY. Flow-rs purest white, perfectly formed and sweet

N. odorata rosea. PINK WATER LILY. Variety of preceding with pink flowers.

MISCELLANEOUS PLANTS

FE group here everything, excepting Roses, not included in previous divisions: Semi-woody Plants, Herbaceous Perennials, Bulbs, Grasses, Bedding and Border Plants, Greenhouse and Conservatory Plants, etc. Hence it will readily be seen that some of our very finest plants are necessarily placed here.

ABUTILON: Flowering Maple

Semi-evergreen shrubs of strong, loose growth and moderate hardiness. Most kinds have leaves lobed like Maple. Flowers drooping and mainly bell-shaped, of various shades of red and vellow. Varieties are as follows:

Boule de Neige. Pure white. Very free bloom-

Duc de Malakoff. Crimson, veined carmine.

Eclipse. A variety of Megapotamicum. Leaves dark green, handsomely blotched with creamy white.

Golden Fleece. Bright vellow: very free flowerino

Megapotamicum. Tropical America. Distinct species. Leaves long and slender, not Maple-shaped. Calyx almost covers petals, which open very slightly. Pistil and stamens protrude convery slightly. Pistil and stamens propiously. Calyx red, petals yellow.

Savitzi. Leaves large with a broad, white margin. The plants grow dwarf and compact. Excellent for bedding.

Sensation. Bright orange salmon, veined red. Petals overlapping and recurved. Flowers very handsome.

Thompson's Double. Orange yellow, veined red; ery double. Leaves dark green spotted creamy yellow. A distinct species.

ACHILLEA

A. ptarmica "The Pearl." Herbaceous perennial growing a foot or two tall. Bears an abundance of small, pure white, full, double flowers all summer. Flowers keep excellently when cut.

AGAPANTHUS

Evergreen, tuberous-rooted, stemless plants. Leaves strap-shaped. Flowers like lilies, borne in large, showy umbels on a stalk two or three feet Bloom all summer. Prefer moist location.

A. umbellatus. AFRICAN LILY. Cape of Good Hope. Flowers blue.

A. umbellatus albidus. Variety of preceding with white flowers

A. umbeliatus mooreanus. A variety of compact, dwarf habit with dark blue flowers.

AMARYLLIS

For other plants usually cultivated under this name see *Hippeastrum* and *Sprekelia*. We propagate but one true Amarvllis.

gate but one true Amaryllis.

A. belladonna. BELLADONNA LILY. Cape of Good Hope. A great favorite. Leaves are strapshaped; appearing during the winter, they die to the ground in early summer. The solid, leafless flower stalks soon appear, attaining a height of two feet or more and bearing a number of beautiful, fragrant, pink, tubular flowers.



Adiantum capillus-veneris imbricatum. VENUS-HAIR FERN See page 76



Agapanthus umbellatus. African Lily See page 77

ANEMONE

The following three varieties are forms of *A. japonica*. Herbaceous perennials growing three or four feet tall. Leaves and stems very silky. Flowers saucer-shaped, on long stalks, borne in late summer and fall. Very beautiful.

Prince Henry. Flowers deep claret. Quite double.

 ${\bf Queen}$ Charlotte. Flowers rosy carmine, semidouble.

Whirlwind. Flowers pure white with yellow stamens. Double.

ANTHURIUM

Evergreen pot plants. Leaves long and slender, on long stalks. Cultivated for the very showy flowers, which are made up on same plan as the Callas, but with the spathe very strongly reflexed. Very odd and interesting.

- A. scherzerianum album. Spathe white.
- A. scherzerianum carneum. Spathe flesh pink.
- A. scherzerianum roseum. Spathe deep pink.
- A. scherzerianum sanguineum. Spathe deep red.

ARUM

A. palaestinum. BLACK CALLA. Palestine. Curious plant formed somewhat like ordinary Calla, but with a purplish black spathe and a long, protruding spadix which is intensely black. Blooms in spring.

ASPARAGUS

Plants grown for their beautiful and delicate foliage; mainly climbers. Flowers are small, greenish white. All will thrive outside if in a protected spot. Smilax is perfectly hardy here; all the others are commonly known as "Asparagus Ferns" and usually grown as house or porch plants.

A. cooperi. The strongest growing Asparagus known. Vigorous climber. Branches and leaves

very dark green, sometimes slightly downy. Will furnish an abundance of beautiful decorative material. Flowers fragrant. Berries red.

A. medeoloides. SMILAX. Africa. Climbing herbaceous perennial highly prized for its beautiful foliage and close, twining habit. Flowers small and greenish white, but dainty and fragrant. Dormant in late summer, flourishing during winter and spring.

A. plumosus blampiedi. Very strong climber. Foliage similar to following, but with shorter leaves. Fronds are narrower. Otherwise about the same.

A. plumosus nanus. An improved form of the old A. plumosus, of more compact growth. Fronds are perfectly flat, triangular in outline and very fine. It has the remarkable power of retaining its form and color for days and even weeks after cutting without being kept in water. Moderately hardy outside. Habit variable; some are entirely dwarf, the majority more or less climbing.

A. plumosus tenuissimus. Fronds very soft and minutely divided, rich, lustrous green. Good climber.

A. scandens deflexus. Growth similar to A. sprengeri. Has finer and softer foliage. Not as hardy. Very fine for pots or hanging baskets.

A. sprengeri. Natal. Very distinct species. Leaves about an inch long and flattened. Flowers numerous and fragrant, followed by a showy crop of red berries. One of the best for hanging baskets and fine for pot or tub culture. Hardy enough to thrive outside here and makes a strong climber.



Anemone japonica "Queen Charlotte"



Entrance to Office Grounds. Drive lined with Chrysanthemum frutescens Common Marguerite See page 80

ASPIDISTRA

Beautiful foliage plants used mainly for pot culture, though in a shaded and sheltered position they will thrive outside. Makes no stalk. Leaves long, large and wavy; spring up from the roots and stand nearly erect. Flowers curiously formed, livid purple and borne at surface of the ground. Of easy culture.

A. lurida. China. As above; leaves dark green. A. lurida variegata. Variety of preceding strongly marked with creamy bands running the length of the leaves.

CALCEOLARIA

Shrubby Calceolaria. (Species unknown; doubtless a garden hybrid.) Fine little shrub of low growth, bearing large clusters of highly colored flowers, brownish yellow, suffused orange red. Individual flowers are formed like "Lady Slipper" and are borne in good-sized clusters on stalks that bring them well above the foliage.

CAMPANULA: Bell Flower

C. pyramidalis alba. WHITE CHIMNEY BELL FLOWER. Austria. At first tufted and stemless. Before flowering it sends up a slender stalk eight or ten feet tall with short, erect branches, the whole covered with a profusion of pure white, bell-shaped flowers. Its unique habit and the pure beauty of the lovely flowers never fail to elicit admiration.

CANNA

Well-known flowering plants with large, tropical leaves, surmounted by spikes of showy flowers produced all summer. They prefer a rich soil and produced all summer. They prefer a rich soil and plenty of moisture. We grow the following varieties, all hybrids:

Admiral Avellan. Orange scarlet; tall; leaves purple.

Admiral Gervais. Scarlet; medium; leaves green.

Alfonse Bouvier. Brilliant crimson; tall; leaves green.

Allemania, Salmon bordered vellow; tall; leaves green.

Austria. Canary yellow; medium; leaves green. Burbank. Yellow; medium; leaves green.
Florence Vaughan. Yellow spotted red; tall;

leaves green.

Geoffrey St. Hilaire. Dark red; tall; leaves purple.

Italia. Bright scarlet; tall; leaves green.
Mad. Crozy. Crimson scarlet bordered yellow;

low; leaves green. Mont Blanc. Creamy white; low; leaves green. Mrs. Kate Gray. Orange scarlet, overlaid with gold; very tall; leaves green.

Pres. Meyer. Cherry carmine; low; leaves green.

Queen Charlotte. Rich scarlet crimson: low: leaves green.

Sam Trelease. Ruddy orange with yellow base; tall; leaves green.

CAREX: Sedge

C. morrowi (C. japonica). JAPANESE SEDGE. Handsome, grass-like evergreen plant. Leaves have white stripe along each margin. Like a miniature Pampas Grass.

CERATOSTIGMA

C. plumbaginoides (Plumbago larpentae). Low herbaceous perennial rarely over a foot high. Branches red. Flowers shaped like common Plumbago, but a beautiful deep blue and borne profusely in dense clusters during late summer and fall.

CHRYSANTHEMUM

A diversified genus, including not only the ordinary Chrysanthemums, but also Marguerites, Pyrethrums, "Daisies," etc. The named varieties of double-flowering Chrysanthemums are probably all hybrids between C. indicum and C. morifolium. Our list comprises:

CHRYSANTHEMUMS

Col. Appleton. Golden yellow. Convention Hall. Magnificent white. Glitter. Fine, glistening yellow. Flower so and symmetrical; large; borne on stiff stems. Flower solid



SHOW DAHLIA: LE GRAND MANITOU See page 81

CHRYSANTHEMUMS-Continued

Glory of the Pacific. Pink; early.

Golden Eagle. Deep golden yellow; compact with incurved petals.

Kinkora. Pink; petals reflexed. Extra fine. Lincoln. Yellow. Petals incurved.

Lynnwood Hall. Snow white. Very large and perfectly incurved.

Major Bonnafon. Yellow. Old, but one of the best.

Matchless. Fine red. Petals reflexed.

Mrs. E. G. Hill. Flesh pink. Early. Flat.

Mrs. W. Wells. Unique shade of reddish, bronzy orange. Petals long and drooping.

Norfolk Blush. Enormous flower of very pale blush.

Paul Braunt. Petals yellow outside, coppery orange inside.

Shilowa. Red. Flat.

Silver Wedding. White. Broad petals. Timothy Eaton. White petals incurved. Large.

W. B. Smith. Light pink; large; free bloomer. W. C. Moir. Fine, white Japanese incurved sort; large and perfectly round.

White Mayflower. White. Petals incurved. Willowbrook. White. Petals reflexed. Wm. Duckham. Yellow. Very tall. Large. Xeno. Pink. Dwarf. Petals incurved. Late. Yellow Eaton. Bright yellow. Very large.

MARGUERITES

Shrubs widely grown in California and thriving under almost any conditions. (For "Blue Marguerite" see Felicia.)

C. frutescens. WHITE MARGUERITE; PARIS DAISY. Known throughout the State. A wonderfully free bloomer. Seems to have no enemies and

thrives almost anywhere. Makes an excellent flow-ering hedge.

ering hedge.
C. frutescens lutea. YELLOW MARGUERITE.
A beautiful variety of preceding. Flowers are yellow and slightly larger.
C. frutescens "Mrs. F. Sander." DOUBLE MARGUERITE. Other double Marguerites have been introduced, but this variety is far and away ahead of the rest. Flowers are two or three times as large as common Marguerite and very double. Plant has better foliage and growth is more compact and symmetrical. Splendid for cutting.

SHASTA DAISIES

C. maximum. Said to be hybrids, but usually considered improved forms of this species. Originated by Luther Burbank. Widely grown and very popular

CLEMATIS

C. heracleaefolia davidiana. China. Herbaceous perennial and not at all a climber. Grows only about four feet tall. Has larger leaves than any other Clematis in cultivation. Flowers light blue, in clusters.

C. nybrida (Imantophyllum hybridum). Yery similar to Amaryllis, but without real bulbs. Leaves are long and strap-shaped, evergreen. The cluster of large, showy, orange flowers is borne on a long stalk above the leaves. Remarkably handsome. hybrida (Imantophyllum hybridum).

COLEUS

Bedding plants grown for the wonderfully rich and varied coloring of the foliage. All garden forms are varieties of C. blumei, native to Java.

COREOPSIS

C. lanceolata. Eastern U.S. Herbaceous perennial growing about two feet high. Has bright yellow, daisy-like flowers on long stalks. Excellent for cutting.

CORTADERIA (Gynerium): Pampas Grass

Well-known plants succeeding everywhere in the State. There are several good forms in addition to the common sort.

C. argentea (Gynerium argenteum). S. America. The most widely cultivated but not the handsomest Plumes white.

C. jubata. Very handsome species. Growth like the rest, but has broader leaves and more feathery, glossy, lavender-colored plumes. Often called Purple Pampas Grass. Blooms freely and is remarkably handsome.

NAMED VARIETIES

Elegans. Leaves very narrow. Plumes are glistening white, very feathery and borne on shorter stalks than the common.

Mad. Rendlateri. Plumes very light lavender, almost pink. Called Pink Pampas Grass.

Marabout. Foliage very compact. Plumes white.

Roi des Roses. Leaves narrow. Plumes rosy purple. Winter bloomer.

Variegated. Growth lower than the rest. Leaves narrow, with white stripes.

COTYLEDON (Echeveria)

C. secunda glauca. Mexico. Little stemless plant used for edging. Leaves very glaucous, in a rosette three or four inches broad. Multiplies rapidly. Flowers reddish yellow, on a stalk six to twelve inches high. Sometimes called "Hen and Chick-ors."

CRINUM

Quite similar to Amaryllis and sometimes so called. Leaves long and very broad. Flowers are funnel-shaped, large and often fragrant; borne in clusters on stout, hollow stalks.

C. amabile. Sumatra. Flowers very large; white, veined purplish red; erect in bud, but drooping when open. Very fragrant.

C. asiaticum. China. Flowers medium-sized, with narrow, spreading segments; white with reddish stamens.

C. fimbriatulum. Flowers short and rather broad; white with red band in each petal. Very pretty.

C. longifolium. S. Africa. Leaves evergreen, two or three feet long. Flowers tubular; white, tinged red on back and sometimes on face. Very fragrant.

C. longifolium album. Variety of preceding with pure white flowers.

C. powelli rosea. Garden hybrid. Has large leaves, long and broad. Flowers are a beautiful rosy pink.

DAHLIA

Flowering plants of greatest value, which should be more extensively planted in our State. They require very little care, have a long blooming period and show a range of color that is hardly equalled in any other genus. Listed below is one true species, entirely unlike the rest and a collection of named varieties divided into the "Cactus" and "Show" types. Both are large. The former has flowers with more or less pointed "petals," while in the latter the flowers are extremely symmetrical, with cupped petals.

D. excelsa (D. arborea). TREE DAHLIA. Mexico. A most striking plant, attaining a height of 20 feet. Leaves very large, with numerous leaflets. Flowers four or five inches broad, single, pink marked with red and purple.

CACTUS DAHLIAS

Aegir. Fiery scarlet. Petals broad and strongly twisted. Very large and extra fine.

Capstan. Orange, flushed red.

Cinderella. Purplish magenta. Counters of Lonsdale. Apricot yellow shading to pink. Flowers large and well formed. Extremely free bloomer. Early.

Dankward. Light rosy purple.

F. Bartels. Orange, flushed cherry. Flowers full and somewhat flattened.

Kingfisher. Purplish crimson. Very early.

Mrs. A. Beck. Light scarlet. Blooms late. Mrs. A. Beck. Light scarlet. Blooms Nerthus. Bronzy, tinted carmine rose.

Purity. Pure white. Petals slender and strongtwisted.

Rheinkonig. Pure white; medium size.
Ruby. Very well built. Rich scarlet with purplish center.

Sparkler. Fiery scarlet. Outer petals strongly

Standard Bearer. Flower built very finely. Outer petals quilled, inner cupped. Beautiful orange scarlet.

Uhlan. Petals very broad. Velvety scarlet overlaid with rich crimson. Beautifully formed. Wodan. Salmon rose, buff center. Extremely

Wolfgang von Goethe. Apricot shaded carmine. Large.

SHOW DAHLIAS

Beloit. Purplish garnet. Very large. Delice. Glowing rose pink. Very fine.

Dr. Boyers. Red striped white.

Le Grand Manitou. Brilliantly variegated white ad purple. Very large. Occasionally selfand purple. colored.
Mr. Thompson.

Yellow ground, striped and spotted with crimson.

Perle de Lyon. Pure white; large and beautifully formed. Excellent for cutting.

DATURA (Brugmansia)

D. arborea. ANGEL'S TRUMPET. Much rarer than the following. Has smooth leaves and larger white flowers.

D. cornigera (Brugmansia knlghti). Mexico. 10 ft. Well-known large shrub of coarse growth. Leaves downy, large. Flowers drooping, trumpet-shaped, about eight inches long, white or creamy and usually double. Very fragrant, particularly at

D. sanguinea. Peru. 15 ft. Grows taller and more erect than preceding. Flowers drooping, greenish red.

DELPHINIUM: Larkspur

Beautiful flowers well distinguished by the long spur at base. Of the herbaceous perennial sorts we have selected the variety "Belladonna" as best. It is a free and continuous bloomer, bearing fine spikes of clear turquoise or azure blue flowers.

DIANTHUS: Carnation

D. caryophyllus. Requires no description. When planted out they need a good, rich soil. If large flowers are desired, all buds except the terminal one should be removed as soon as they appear. When cutting, remove the entire stem to within an inch or two of the main trunk.

California Gold. Bright yellow, striped red.

Dr. Tevis. Scarlet.

Enchantress. Flesh pink. Very large.

Ethel Crocker. Pink. Free bloomer outside.

Gloriosa. Shell pink.

Gov. Roosevelt. Deep, rich crimson. Hannah Hobart. Bright pink. Very large. Harlowarden. Crimson. Large and free bloomer.

Harriette Bradford. White striped red.

Herald. Bright scarlet.

Leslie Paul. Deep rose.

Mrs. T. Earl. Deep orange striped carmine.

Mrs. Thos. W. Lawson. Cerise pink.

Prosperity. White striped pink. Very large.

CACTUS DAHLIA: WODAN



Ervthrina crista-galli. CORAL PLANT

DIANTHUS: Carnation-Continued

Pure White Enchantress. Pure white sport of Enchantress.

Queen Louise. Pure white. Robert Craig. Brilliant scarlet. Very fragrant. Rose Pink Enchantress.

Sophie Sievers. Golden yellow striped red.

The Bride Purest white.

Victory. Bright searlet. Large; very fragrant. Washington. Light rose pink.

White Enchantress. Creamy white. Sport of Enchantress.

White Wonder. Very large; pure white.

DICENTRA (Dielytra)

D. spectabilis. BLEEDING HEART, Japan, An old favorite. Grows a foot or two tall and has racemes of drooping, rosy red, heart-shaped flowers in spring. Herbaceous perennial.

ERYTHRINA

E. crista-galli. CORAL PLANT. Brazil. Partly shrubby, flowering shoots dying back to the hard wood. Leaves of three large leaflets. Flowers are most gorgeous, being very large individually and borne in elongated panicles from one to two feet long; color brilliant crimson, shaded scarlet. Blooms during the summer months and is then remarkably showy. showy.

FELICIA

F. amellodes (Agathaea coelestis). BLUE MAR-GUERITE. S. Africa. Of lower and more slender growth than the common Marguerite. Leaves small and rounded. Flowers are an exquisite sky blue.

FESTUCA: Fescue Grass

F. glauca. BLUE FESCUE GRASS. A handsome low-growing grass with very fine, intensely silvery blue leaves. Excellent for borders, window boxes and for trimming hanging baskets.

FUCHSIA

Practically all the shrubby Fuchsias commonly cultivated are hybrids. The graceful habit of the plants, the unusual coloring and form of the flowers and the profusion of bloom have made them great favorites. They thrive best where the summer heat is not too great and prefer a shaded situation.

Black Prince. Sepals carmine; corolla single, rose pink.

Constance. Sepals rose pink; corolla single, white

Jupiter. Sepals bright scarlet: corolla double.

rosy purple.

M. Freebel. Sepals bright red: corolla single. light purple.

Minnesota. Sepals white, shaded red inside; corolla single, purple.

Mrs. E. G. Hill. Sepals scarlet; corolla double, pure white, very large.

Phenomenal. Sepals bright scarlet; corolla double, purple. Our largest Fuchsia.

Pillar of Gold. Leaves bronzy red, shaded olive green. Will climb if trained to a wall.

Prince Charming. Sepals red; corolla single, rosy purple.

Renan. Sepals red; corolla single, purple. Leaves very dark green.

Riccartoni. See Deciduous Shrubs.

Speciosa. Sepals flesh; corolla orange red. Calyx tube and protruding style both unusually long. Good climber. long.

Walter Long. Flowers greatly elongated. Sepals bright red; corolla single, light purple.

TRAILING SPECIES

F. procumbens. TRAILING FUCHSIA. Zealand. Interesting little evergreen trailing plant, very handsome in hanging baskets. Leaves very small, rounded, somewhat heart-shaped. Flowers small, greenish yellow, with purple sepals. Bears large, magenta-colored berries. Pretty and uncommon.

GAILLARDIA: Blanket Flower

G. aristata (G. grandiflora). Central United States. Herbaceous perennial growing about two feet high. Flowers composite, yellow marked red, about three inches broad. Blooms all summer and fall. Splendid for cutting, as they have long, strong stems and last for a long time in water. Likes full sun

GERBERA

G. jamesoni hybrida. HYBRID TRANSVAAL DAISY. S. Africa. Stemless, herbaceous perennial. Leaves like Dandelion. Flowers borne on very long Leaves like Dandelion. Flowers borne on very long stalks; composite, about three inches broad, with small disc and long, showy petals (rays). As originally introduced, this plant had medium-sized orange red flowers. These new hybrids run from white through straw, yellow, pink and salmon to a rich, brilliant red. Will keep ten days after cutting. One of the very best things in this section. Requires well-drained soil and thrives well in California fornia.

GYPSOPHILA

G. paniculata. BABY'S BREATH. Europe. 3 ft. Finely branched, feathery plant bearing light, alry panicles of tiny flowers. Especially useful for trimming bouquets. One of the daintiest plants we grow.

HELIOTROPIUM: Heliotrope

An old favorite for its sweet-scented flowers. Although tender, it can be grown outside where there are only very slight frosts if planted against a wall. If trained up, can be made to climb moderately. Likes full sun. Cultivated forms have been developed from Peruvian species. Great improvements have recently been made and the following named sorts will be found remarkably fine.

Buisson Fleuri. Semi-dwarf. Free bloomer. Trusses very large. Flowers rosy-violet, with star-shaped eye.

Lord Roberts. Growth dwarf. Flowers unusually large, bright blue, with white center; borne in large panicles, which are produced in greatest profusion. Very fine.

Lueur d'Opale. Free flowering. Trusses extra large. Flowers light lilac, fading to pearl-white with vellow eye.

Delaux. Flowers light purple.

Mad. Delaux. Flowers light purple. Leaves overlaid with yellow.

Prince Charmant. Flowers bluish mauve, in very large panicles. Growth compact.

White Lady. Flowers creamy white. Growth

compact.

HEMEROCALLIS: Yellow Day Lily

H. aurantiaca major. Improved form of the orange colored Day Lily. Flowers are a beautiful bright orange and fully five or six inches broad when open. Forms large clumps and is very gorgeous in bloom.

HIBISCUS

The two species below are of entirely different character and habit, but all have flowers formed after the fashion of Mallow or Hollyhock.

H. manihot (Abelmoschus manihot). Herbaceous perennial, attaining six feet or more, with large, palmately lobed leaves. Flowers are extremely large, up to eight inches broad, bright yellow with a purple eye at base.

a purple eye at base.

H. rosa-sinensis. CHINESE HIBISCUS. Asia. In milder sections this is a true woody shrub, but as it is too tender to thrive outdoors here we include it in this class. Doubtless there are favored locations in the Bay region where it can be grown in the open as it is in the South. Leaves are rich, glossy green. Flowers are borne freely even when very small, and if not cut back by frost they are practically continuous bloomers. We have discarded the typical form in favor of the two following improved varieties:

Flowers large, semi-double, bright Miniatus. vermilion-scarlet.

Peachblow. Strong grower. Flowers semi-double, beautiful soft pink.

HIPPEASTRUM: Amaryllis

H. vittatum lindeni. One of the several plants usually known as Amaryllis. Leaves appear with or after the flowers, which are funnel-shaped and sometimes red, but usually white, marked with feathered pink stripes. Blooms mainly in early stripes.

A well-known and very extensive genus, of which we propagate only one species.

I. laevigata (I. kaempferi). JAPANESE IRIS. Has beautiful, very large, somewhat flattened flowers. Colors range through violet, blue and white in a great variety of shades. They require a moist location and plenty of water for best results.

JACOBINIA

J. magnifica carnea (Justicia carnea). Brazil. Half shrubby plant blooming when very young. Flowers are flesh-pink, two or three inches long, slender, tubular, arched toward the top; borne in clusters, surrounding ends of branches.

KNIPHOFIA (Tritoma): Red-hot Poker Plant

Extremely showy plants. Leaves tufted, grasslike; two or three feet long. Flowers tubular, about an inch long, massed in tall spikes borne well above the foliage.

K. aloides (K. uvaria). Africa. The most commonly grown Poker Plant. Spikes of moderate length, upper flowers bright red, lower yellow.

K. aloides pfitzeri. Grows tall and blooms all summer. Brighter colored than preceding.

K. corallina. Very slender, both as to leaves and stalks. Spikes are of medium size, a beautiful coral red at top, shading to orange red below. Color particularly fine. Very free bloomer over long period.

K. macowani. Vigorous grower with dark foliage, stout stalks and deeper colored flowers than the rost

LEONOTIS

L. leonurus. LION'S TAIL. S. Africa. 6 ft. Medium-sized shrub of rather straggling growth. Flowers are ruddy orange, with a surface like plush, about two inches long; borne in whorls around branches during late summer and fall.

LESPEDEZA: Bush Clover

L. sieboldi (Desmodium penduliflorum). Japan. Herbaceous perennial of strong growth. Shoots grow about six or seven feet tall, but are borne down by the weight of the rosy purple, pea-shaped flowers produced in very numerous, long, drooping racemes during late summer.

LIPPIA

L. repens. A substitute for lawn grass, but does not look like grass in the very least. Spreads rapidly, roots at joints and soon forms a mat over the ground. Not injured, but rather benefited by being trodden upon. Requires a minimum amount of water, far less than grass. Where it has a chance will bloom freely; flowers tiny, in small heads, lilaccolored

LOTUS

A genus of plants with usually pea-shaped flowers. (For Egyptian Lotus, an entirely differ-ent thing, see Nelumbo under Aquatics.) Both species described below are drooping plants with fine foliage, splendidly adapted for hanging baskets, window boxes, etc., where downward growth is wanted



Gerbera jamesoni hybrida Hybrid Transvaal Daisy



Lotus bertholeti. CORAL GEM

LOTUS-Continued

L. bertholeti (L. peliorhyncus). CORAL GEM. Canary Islands. Branches very slender, long and pendulous; leaves thread-like; the entire plant silvery gray. The flowers stand out in vivid contrast, being scarlet or crimson, about an inch and a half long, borne in long clusters toward ends of drooping shoots. Very fine.

L. canariensis. Of slower and more compact growth, with tiny, clover-like leaves. Flowers peashaped, small but numerous and very bright yellow.

MALVAVISCUS

M. arboreus (Achania malvaviscus). TURK'S CAP. Semi-evergreen shrub of very spreading growth. Leaves large, velvety, more or less lobed. Flowers erect, bright red, with tufted stamens protruding considerably beyond top of petals, which do not open. Will thrive in very dry locations and will sometimes climb if planted under trees. Blooms very freely.

MEDICAGO

M. arborea. MOON TREFOIL. S. Europe. 8 ft. Quick-growing, very densely branched shrub with clover-like leaves and numerous small, yellow, peashaped flowers.

MELIANTHUS

M. major. S. Africa. Coarse-growing plant with very large leaves divided into large, coarsely toothed leaflets. The whole plant is silvery gray. Flowers are reddish brown, borne in erect spikes about a foot tall. Plant of very striking appearance.

MISCANTHUS (Eulalia)

M. sinensis (Eulalia japonica). Asia. Hardy perennial grass, growing four to five feet and resembling Pampas Grass on a smaller scale. The blooms have clusters of silky hairs, giving them a beautiful feathery appearance. Leaves green. We propagate only the variegated forms listed below.

M. sinensis gracillimus. Variety of preceding. Leaves only a third as broad as the type and marked with a single white line along the midrib.

M. sinensis variegatus. Another variegated variety. Leaves same breadth as in type, but with several white stripes running their full length.

M. sinensis zebrinus. Leaves slightly narrower than type. Variegation is very odd, consisting of broad, white bands across the leaves.

MUSA: Banana

ABYSSINIAN BANANA. M. ensete. Probably the most tropical-looking plant that can be grown in this part of the State. Leaves extremely large, bright green with ruddy midribs. Needs to be sheltered from severe winds and does not like much frost.

PAEONIA: Peony

Practically all the garden varieties of herbaceous Peonies are selected forms or hybrids be-tween P. albiflora and P. officinalis. All bloom in late spring and thrive best in cool, moist ground. Our assortment comprises the following named varieties:

Amabilis Grandiflora. Unusually large and very

double. Pink, shaded purple.

Bicolor Rosea. Pink with lighter center.

Comte de Paris. Light rose. Delachei. Dark purplish crimson.

Elegantissima. Pink, light center.

Festiva Maxima. Enormously large, pure white, sometimes slightly tinged claret at tips of center petals. The finest white variety in cultivation. Formosa Alba. White.

Grandiflora Nivea. Large, double, white.

Jamfitre. Light pink, cream center. Louis van Houtte. Crimson. Monsieur Bellart. Purplish crimson.

Officinalis. Single, dark red, early.

Papariflora. White, lightly tinged yellow. Pottsi. Pink.

Souvenir de l'Exposition Universelle.
red, large, full double.
Triomphe du Nord. Shell pink.
Victor Modeste. Pale lilac-rose on

white ground.

PANDANUS: Screw Pine

P. veitchi. Polynesia. Handsome foliage plant with single stem and bearing long, sword-shaped, spiny-edged leaves, which are produced spirally from the trunk. They are gracefully recurved, dark green in center, strongly margined with bands of white. Very handsome pot plant.

PELARGONIUM: Geranium; Pelargonium

Includes the "Pelargoniums" or "Lady Washington Geraniums" (P. domesticum) with woody branches and more or less variegated flowers, the common or bush Geraniums (P. hortorum) and the climbing or Ivy-leaved Geraniums (P. peltatum), the last two having soft, succulent branches.

P. domesticum. LADY WASHINGTON GERANIUM; PELARGONIUM. S. Africa. Flowers are larger and more beautifully colored than those of the common Geranium. They are not quite as hardy and require more attention for best results. Properly cared for they rank among our finest garden plants. Varieties as follows:

Agatha. Crimson shaded maroon, edges lighter. Capt. Rakes. Very large and full; dark, fiery crimson.

Cecella. Light pink, blotched dark crimson on upper petals.

Champion. White, upper petals blotched crim-

Masters. Rich, dark red, upper petals

blotched black.

Duchess of Teck. White, large and semi-double; upper petals sometimes blotched red.

Borne in large clusters. Our best white sort. Duke of Albany. Dark maroon center, crimson toward edge.

Duke of Fife. Very deep pink on white ground. Embassy. White, blotched crimson on upper netals

Gloire de Tours. Bright scarlet, shaded maroon. Extra fine.

Red shaded maroon, lower petals lighter.

Mad. Meillez. Rosy pink, overlaid with maroon.
Mad. Thiebaud. White with pink band and
white margin. Very free bloomer. One of the

Rose overlaid with deep maroon. White, upper petals blotched dark Milton. crimson

Mrs. Harrison. Similar to Mad. Thiebaud, but more double; petals fringed toward base. Myra. Dark crimson, shaded black on upper

Myra. petals.

Prince of Pelargoniums. Crimson flushed ver-

milion

Princess Beatrice. Creamy white, upper petals blotched dark crimson. Semi-double.

Princess Maud. Carmine bordered white; upper

petals blotched maroon. Queen Victoria. Vermilion margined white, up-

per petals blotched maroon.
Striata Elegans. Flowers large, magenta flecked or barred with elegant blue mauve. magenta-rose

Variegated. Rose striped crimson.
P. hortorum. COMMON GERANIUM. P. hortorum. COMMON GERANIUM. S. Africa. A constant source of wonder to visitors is "the way geraniums grow in California." Certainly conditions seem ideal for this magnificent class of plants. Considering their freedom from enemies, adaptability to climate and wonderful profusion of bloom even with little or no care, it is not surprising that they are such favorites. They like plenty of sun and very little water during blooming period.

Alice of Vincennes. Single volve hordered.

Alice of Vincennes. Single; rosy pink, bordered and shaded rosy red, center white.

Alphonse Riccard. Semi-double; large; bright vermilion scarlet.

Beaute Poitevine. Semi-double; salmon pink. Fine.

Braunte. Semi-double; scarlet. Columbia. Single; bright scarlet. Large and very fine.

Gertrude Pearson. Single; rosy pink, white blotch on upper petals.

Gettysburg. Single; magenta. Hecla. A fine light red; single. Henry Bonnie. Double; white.

Jacquerie. Single; rich crimson scarlet. Splendid bedder.

did bedder.

Jean Viaud. Single; bright rosy pink with distinct white eye. Clusters very large.

L'Aube. Single; shell pink.

La Favorite. The best double white.

Mad. Guilbert. Double; deep pink.

Mad. Hoste. Double; crimson shaded scarlet.

One of the best bedders.

Mad. Jaulin. Double; delicate pink with white

margin. Mad. Landry. Double; salmon shaded orange.

Double; two distinct

Marquis de Castellane. shades of orange scarlet. Marquis de Montmart. Double; deep carmine

purple.

Marshal McMahon. Leaves green and bronze.

Miss Frances Perkins. Double; bright pink.

Mrs. E. G. Hill. Single; beautiful salmon pink.

Extra fine.

peltatum. IVY GERANIUM. Leaves usually smooth. Flowers variously formed. Make good climbers, especially fine for covering fences or walls. Make good

Beauty of Castle Hill. Double; deep pink with dark blotches on upper petals. Very free bloomer. Chas. Monselet. Double; fiery red, upper petals have dark blotches.

have dark blotches.

Garden's Glory. One of the best climbing sorts.

Very full and double. Clear, bright scarlet.

Mission. A remarkably beautiful and freeblooming variety, extensively grown around the
old mission grounds at Mission San Jose. Flowers are semi-double, shell pink with a faint lavender tone, shaded carmine. The upper petals
are marked with deep wine-color stripes. Leaves
are ivy-like, with very sharp lobes. It is a wonderfully free bloomer and at a little distance
appears a solid mass of lovely pink.

PENTSTEMON

P. cordifolius. CALIFORNIA SCARLET HON-EYSUCKLE. Slender, woody plant growing about six feet tall. Leaves small, serrate. Flowers in terminal clusters, nearly two inches long, tubular, brilliant scarlet, shaded orange. Needs the support of a stake

PETUNIA

P. hybrida. Well-known half-shrubby plants of very free blooming habit. The fragrant, trumpet-shaped flowers are single and double. Colors range through white and various shades of red and pur-In bloom all summer.

Handsome herbaceous perennial. Cultivated varieties are forms of P. paniculata (P. decussata). Attain a height of two feet or more, the upper part of plant comprising the large panicle of salver-shaped flowers. Colors through various shades of red, pink, purple and white.

Albion. Pure white with faint red eye.

B. Comte. Brilliant, rich French purple.
Colibri. Flesh pink, carmine center.
Eclaireur. Bright, rosy magenta, lighter center.
Eugene Danzenvillier. Lilac, white center.
Jeanne d'Arc. Pure white. Late flowering.
Le Mahdi. White, carmine center.
Mad. Paul Dutrie. Delicate lilac rose.
Mozart. Pink, red center.
R. P. Struthers. Bright rosy carmine with claret eye.

Selma. Delicate pale rose with red eye. Siebold. Bright scarlet. Sunshine. Cerise red with lighter center and

Vesuvius. Red with bright purple eye.

Vesuvius. Red with bright purple eye.

Von Lassburg. Pure white; individual flowers unusually large.



Musa ensete. ABYSSINIAN BANANA See page 84



Romneya coulteri. Matilija Poppy

PHORMIUM

Foliage plants of great economic, as well as decorative, value. The leaves are sword-shaped and have wonderful tensile strength due to a fine white fiber. Flowers are red or yellow, borne on stalks usually about twice as tall as leaves.

P. cookianum variegatum (P. colensoi variegatum). GOLDEN NEW ZEALAND FLAX. Much smaller than the following. Leaves average about three feet long and are strongly marked with yellow bands and stripes, all running lengthwise. The fiber is extremely fine, plentiful and very lustrous. Very handsome form.

P. tenax. NEW ZEALAND FLAX. Leaves clear green, often six feet or longer. Flower stalks in proportion. The fiber is so plentiful that a small strip of the leaf makes excellent tying material. It is imported in great quantities from New Zealand. Makes large clumps of striking appearance.

P. tenax variegatum. VARIEGATED NEW ZEALAND FLAX. Variety of preceding, identical in all respects except that leaves are conspicuously striped lengthwise with creamy white.

RICHARDIA: Calla

R. elliottiana. GOLDEN CALLA. S. Africa. A rare and beautiful species. Leaves have translucent spots. Flowers (spathes) are deep golden yellow and last ten days or more. There are two or three other "yellow Callas" offered, but they are far inferior to this.

R. albo-maculata. SPOTTED CALLA. Growth low. Leaves deep green, spotted white. Flowers, borne on short stalks, are creamy yellow with crimson throat.

ROMNEYA

R. coulteri. MATILIJA POPPY. Southern California. Our finest native flowering plant. Half-shrubby, forming a large bush of silvery hue. The flowers are magnificent, sometimes six inches broad; petals purest white, center rich yellow from the numerous stamens. The fragrance is much like that of the pulp of a ripe orange. The individual flowers last many days and the plants are in bloom all summer. Difficult to propagate, hence scarce, but there is no difficulty about transplanting good pot-grown plants.

RUDBECKIA

R. laciniata flore pleno. GOLDEN GLOW. Tall-growing herbaceous perennial, bearing a great abundance of full, double, yellow flowers, like Chrysanthemums. Blooms all summer. Splendid for cutting.

RUSSELIA

R. elegantissima. Hybrid. Dainty plant of trailing habit, with very small leaves and bright red, slender, tubular flowers about an inch long. Very pretty in hanging baskets.

SAGINA

S. subulata. BABY MOSS; PEARLWORT. Evergreen plant completely covering the ground with its bright green foliage, which makes it look like moss. Has tiny, white flowers on comparatively long, slender stalks. Fine for shaded places.

SALVIA: Sage

Only the red bedding Salvia is ordinarily thought of under this name. It is, however, an enormous genus of over 600 species, of which comparatively few are cultivated. All are square-stemmed plants belonging to Mint family.

S. involucrata. Vigorous grower, attaining 5 or 6 ft. Flowers rosy purple, in long, loose spikes. Each pair of flowers spring from a pair of large, showy bracts colored same as flowers.

S. leucantha. Mexico. Low-growing, shrubby plant with narrow, pointed leaves. Entirely covered with white down. Flowers are white, but surrounded by a very conspicuous brilliant purple calyx.

SANSEVIERIA

S. zeylanica. BOWSTRING HEMP. Africa; Asia. Handsome foliage plant with stout, fleshy, erect leaves, which are light green, conspicuously variegated with broad, white, transverse bands. Excellent for pot culture and can be planted out in frostless regions. Contains a valuable fiber of great strength.

SAXIFRAGA: Saxifrage

S. umbrosa. ST. PATRICK'S CABBAGE. Europe. Valuable low-growing plant with large leaves. Bears good-sized pink flowers in a large panicle rising to about a foot above ground. Commences to bloom in late autumn and continues through the Severest frosts seem to have no effect

SENECIO

S. kaempferi aureo-maculatus (Farfugium grande). LEOPARD PLANT. Handsome pot plant with large, nearly circular leaves, which have a green ground, but brilliantly marked with large, yellow spots.

SOLIDAGO: Golden Rod

Fall-blooming herbaceous perennials growing three or four feet tall. Individual flower heads insignificant, but borne in showy masses toward ends of shoots.

S. canadensis. America. Flowers yellow.

S. canadensis. N. America. Flowering branches plumy.
S. serotina. Yellow. More compact than preced-

SPREKELIA

S. formosissima. JACOBEAN LILY. Mexico. Very low. Flower is large and showy red, not tubular, resembling an orchid. Borne on short, hollow stem.

STRELITZIA

S. reginae. BIRD OF PARADISE FLOWER. S. Africa. Grows four or five feet tall. Leaves about a foot long on two or three foot stalks, dark green. Flowers are vividly parti-colored, orange yellow and bluish purple, springing from spathes which stand horizontally. A magnificently showy specimen when in bloom and attractive at any time. Very rare.

STREPTOSOLEN

S. jamesoni. Colombia. A splendid bedding plant steadily attaining greater popularity. Leaves like Heliotrope. Flowers phlox-shaped, orange and red, borne profusely. Makes a shrub a few feet tall or can be trained up as a vine. Slightly hardier than Heliotrope.

SWAINSONA

Shrubby plants of spreading growth. Pinnate leaves, very finely divided. Flowers much resembling Sweet Peas, but smaller and not fragrant; borne in long, erect sprays. Bloom con-

tinually through spring and summer. Very showy and handsome; excellent for cutting.

S. galegifolia albiflora. Australia. Flowers pure white.

S. greyana. Australia. Flowers varying from red to pink.

VERBENA

Well-known bedding plants of low V. hvbrida. V. hybrida. Well-khown bedding plants of toll growth. Although they are partly woody and will last several seasons, it is far better to use new plants each year. This gives richer foliage and far plants each year. This gives richer foliage and far more flowers. Colors range through shades of red, purple, pink and white; there are also variegated

VERNONIA: Ironweed

V. arkansana. Tall-growing, herbaceous perennial, attaining eight or nine feet. Flowers composite, in heads about an inch broad, without rays; rich rosy purple. Blooms in late summer and early

VIOLA: Violet: Pansy

V. odorata. The following are all varieties of the English Violet, characterized by rounded leaves and delightful fragrance. Succeed best in rich, moist soil, completely or partially shaded.

California. Single; clear violet; medium-sized. Free bloomer and a great favorite.

Golden Gate. Single; reddish purple. Blooms so freely as to hide the foliage. Stems rather short.

short.

Luxonne. Very similar to Princesse de Gales, but lighter colored. Fully as large. Marie Louise. Very double; light violet; in-

Marie Louise. tensely fragrant.

Princesse de Gales. Single; rich violet blue. Extremely large, on very long stems. Very fragrant.

Swanley White. Large, double, white variety. Has delightful spicy fragrance.

V. tricolor. PANSY. We procure each year the best obtainable seed from the leading specialist in its production, hence can offer a very fine strain of plants, far superior to those grown from seed which has been allowed to "run out."

ZERRINA

Z. pendula. VARIEGATED WANDERING JEW. Pretty plant for hanging baskets, etc. Leaves ovate and pointed; clear, bright purple on lower side, while the upper surface has a metalliz, silvery hue narrowly margined with either green or purple, also having a broad band along midrib of same color as margins. Roots at joints and increases rapidly. Frequently called Tradescantia tricolor.

ROSES

R OSE growing is a specialty with us. One of the influences that originally determined the location of our nursery at Niles was the fact that soil and climate were most perfectly adapted to the growth of splendid plants of this beautiful and favorite flower. To these natural advantages we add many years of experience and experiment, so that we honestly believe that no better Roses than ours are grown anywhere.

Our assortment is constantly changing. Unless a variety has some marked point in its favor, it is dropped. New varieties are constantly being tested, and if found valuable are propagated and offered for sale.

Every rosebush we sell is grown entirely in the open ground and almost all are budded. In spite of the pretended objections offered by disseminators of weak plants on their own roots, there is absolutely no doubt that the budded plants are far superior. (There are a very few unimportant exceptions and these we grow from cuttings, anyway.) The only possible objection is that they may send up suckers, but as we use the right kind of stocks and carefully disbud them, this is very unlikely to occur. A further preventive is to plant them so that the point where they have been budded shall be three or four inches below the surface.

PLANTING AND PRUNING

Roses will grow and bloom if planted with only ordinary care, but far better results will be obtained with a little extra attention to The ground should be thoroughly spaded and, unless very rich, should have some well-rotted manure worked in. Fresh manure is likely to kill the plants unless placed on the surface as a mulch after planting is completed. If soil is light and sandy, it is well to work in a good proportion of heavy soil. The bushes are partially pruned before leaving the nursery. Climbers and very strong varieties may be planted as they are, but weak growers should be pruned back even further. Examine the roots carefully; if calluses have formed at the tips, let them remain as they are. Where the ends show no calluses, cut off the tips so that the fresh wood will come into close contact with the soil. Straighten out all roots and as the dirt is filled in see to it that it is well packed around them; this keeps out the air and encourages a prompt growth of rootlets. Be sure that the Rose is planted enough lower than it grew so that the point where it is budded shall be three or four inches beneath the surface. If the plants are at all dry, soak them overnight in a bucket of water before planting.

Tree Roses are to be handled in about the same way. They are pruned back pretty well before shipment. It is absolutely necessary to stake them when planted and to keep them staked thereafter, as the stems never attain sufficient strength to support the heavy top during severe winds.

Future pruning varies with different classes of Roses, but all should be cut back at least once a year before new growth has started. Weak growers require the most pruning, strong growers the least. In all cases the short, crooked growth should be removed entirely and the strongest shoots cut back mod-

erately, leaving enough to form a basis for new growth. When pruning Standards, it is necessary to give attention to the form of the head, so that it may remain symmetrical and globular.

MILDEW AND APHIS

When the leaves show a whitish mould, they are attacked by mildew, which is a fungous disease developing rapidly under certain climatic conditions. It is far worse in some sections than others, and certain varieties are particularly subject to it. The remedy is powdered sulphur applied promptly as soon as the disease appears. This should be done in the morning while the dew is still on the



MAD. CAROLINE TESTOUT See page 91

Put the powdered sulphur in a piece of burlan and sift it as evenly as possible all

over the foliage.

Aphis or Green Flies are the little sucking insects that attack the new soft wood. They are usually kept in check where the plants are sprinkled daily with a strong stream of water. If this cannot be done, remove as many as possible when they first appear and sprinkle the plants well with tobacco water in which a little whale-oil soap has been dissolved. They multiply with wonderful rapidity, so it may be necessary to repeat the treatment two or three times.

DESCRIPTIONS

Varieties are first divided into classes. The characteristics of each class are fully explained under the respective headings and of course apply to all the varieties in that group. Classes are arranged according to number of varieties included, as follows:

Hybrid Tea Tea Hybrid Perpetual Pernetiana Polyantha Noisette Hybrid Sweet Brian Moss Cherokee Irish Single Miscellaneous

At the end of the Rose division will be found an alphabetical list of all varieties described showing the group in which each sort is in-

After names of varieties we give name of originator or disseminator and year of introduction, whenever these are known. In all cases the color of the open flower is the first thing mentioned, as we believe this plan will be found most convenient for customers in searching for suitable varieties. If bud coloring is particularly different, that is also given.

We have tried to make all descriptions fair and conservative; every variety cannot be "one of the very best."

Our assortment is continually changing. We are testing and adding new varieties all the time and dropping those in least demand to keep assortment within a reasonable num-Many of the following are the very latest introductions as we write, but as we expect this edition to last four or five years, we do not separate them as new sorts. year of introduction will prove a good clue.

HYBRID TEA ROSES

A class of comparatively recent origin and today the most important of all. The rapidity of development can be appreciated from the fact that while our price list for 1905 included only twelve varieties of this class out of a total of about two hundred and fifty, approximately five per cent, the following list doesn't fall far short of embracing half of all varieties described.

They were originated by crossing the Tea with the Hybrid Perpetual class, but since varieties have become so numerous many of the new ones are seedlings or results of

*Varieties starred are climbers.

crosses within the class. They show a blending of the beauty, delicacy and perpetual blooming habit of the Teas with the vigor and great hardiness of the Hybrid Perpetual group. Many have the tea scent very strongly developed, while the fragrance of others suggests the Hybrid Perpetuals. As a class they are much hardier than the Teas and generally bear their flowers on longer stems, making them better, as a rule, for cutting,

Antoine Rivolre. (Pernet-Ducher, 1896.) Silvery flesh with salmon or even carmine center. Medium to large. Buds short pointed. Outer petals reflexed when open. Very double; fragrant. Growth is moderate, stems long, production good. Excellent.

Augustine Guinoisseau or White La France. (Guinoisseau, 1889.) White, faintly suffused flesh pink. Generally like La France, but paler. Exceptionally fragrant.

Avoca. (A. Dickson, 1907.) Crimson-scarlet. Buds long and pointed. Fragrant. Growth very vigorous. Free blooming. A splendid variety with magnificent color.

Baldwin or Helen Gould. (Lambert, 1899.) Rosy rimson. Flowers medium to large, full and borne crimson.

Bardou Job. (Nabonnand, 1887.) Velvety scar-let, shaded black. Very free blooming. Flowers semi-double and opening widely. A magnificent hedge rose or can be allowed to grow up as a climber.

Belle Siebrecht or Mrs. W. J. Grant. (A. Dickson, 1895.) Bright rosy pink. Flowers large, well formed and sweetly perfumed. Buds are long and tapering. Grows vigorously and blooms freely. A thoroughly fine variety.

Betty. (A. Dickson, 1905.) Coppery rose overlaid with ruddy gold. Buds long and pointed; moderately double; petals unusually large and conspicuously veined. Stems long. Fragrance rich. Altogether a fine sort that quickly secured high rank.

Blanca. (Paul, 1913.) Creamy white tinted peach or sometimes carmine. Moderate size, buds short pointed, double. Fragrance faint. Growth and production very good. Stems long and flowers mainly come singly.

mainly come singly.

British Queen. (McGredy, 1912.) Pure white. Buds are short pointed and flushed peach, but this tint usually disappears as flower opens. Comes the nearest to a pure white of any Rose in this class, being without any tinge of yellow. The open flowers are particularly well formed, center pointed and outer petals strongly reflexed. Growth vigorous, but very slender.

Captain Christey. (Lacharme, 1873.) Delicate flesh pink, medium to large. Petals have a satiny texture. Often included in the Hybrid Perpetual section, but as one of its parents was Safrano, it certainly belongs here.

Charles J. Grahame. (A. Dickson, 1905.) Crimson with a slight suggestion of orange. Large, finely formed and very fragrant. Color is particularly good.

Chateau de Clos Vougeot. (Pernet-Ducher, 1908.) Crimson center with fiery scarlet tips. Magnificent coloring, which does not readily fade. Fully developed flowers have high center with short, reflexed outer petals. Foliage is very dark green, heightening the color effect of flowers. Stems long. Free bloomer.

Free bloomer.

Chrissie MacKellar. (A. Dickson, 1913.) Orange pink, veined carmine. Difficult coloring to describe. Free flowering and richly scented. Semidouble with pointed buds.

Clara Watson. (Prince, 1894.) Silvery flesh with deep pink center. Resembles Miss Kate Moulton. Buds are very long pointed; flowers are semidouble to double and open beautifully with very strongly reflexed outer petals. Bears moderately in spring, but in utmost profusion in fall.

*Climbing Belle Siebrecht or Climbing Mrs. W. J.

in spring, but in utmost profusion in fall.

*Climbing Belle Siebrecht or Climbing Mrs. W. J.
Grant. (Paul, 1899.) Bright rosy pink. It frequently happens that climbing forms are inferior to their bush prototypes, but this magnificent climber considerably surpasses the bush variety. The flowers are colored the same as the beautiful Belle Siebrecht, but are considerably fuller and far larger; in fact, it is among our largest roses.

HYBRID TEA ROSES-Continued

*Climbing Captain Christy. (Ducher, 1881.) Flesh pink. Flowers same as in bush form.

*Climbing Kaiserin Augusta Victoria (A. Dickson, 1897), or Mrs. Robert Peary (Dingee, 1896). White faintly suffused lemon yellow. Identical with "Kaiserin" except in vigorous climbing habit,

*Climbing Madame Caroline Testout. (Chauvry, 1902.) Bright pink. Identical with "Testout" except in habit. Climbs vigorously; blooms freely. Could not be recommended too highly.

*Climbing Souvenir de Wooton. (Cook, 1890.) Bright crimson. A strong climbing form of the popular Souvenir de Wooton.

C. W. Cowan. (A. Dickson, 1912.) Carmine cerise about like Reine Marie-Henriette. Buds short pointed, opening rather flat. Flowers double, quite fragrant. Not of strong growth, but very free bloomer. Stems long and slender, carrying flowers erect.

Dean Hole. (A. Dickson, 1904.) Silvery carmine, shaded salmon. Buds enormous and very long pointed, opening into a mammoth flower of great substance. Growth strong and vigorous.

Dorothy Page Roberts. (A. Dickson, 1907.) Coppery pink suffused apricot yellow. Color shading very fine. Flowers well formed with very large netals.

Duchess of Albany. (Paul, 1888.) Deep rosc, nearly red. Resembles La France except in color. Blooms freely. Sometimes called "Red La France." Duchess of Sutherland. (A. Dickson, 1912.)

Duchess of Sutherland. (A. Dickson, 1912.) Bright rose pink. Buds very long pointed, borne on splendid strong stems carrying flowers perfectly erect. Very double. Petals large and very conspicuously veined. The bush is unusually good, vigorous, strong and erect, with fine foliage and few thorns.

Earl of Gosford. (McGredy, 1912.) Dark crimson heavily shaded. Growth vigorous, Very fragrant. One of the deepest colored in this section.

grant. One of the deepest colored in this section.

Edith Part. (McGredy, 1913.) Carmine with chamois flushed pink. The pointed buds open beautifully, each petal as it expands shows a rosy cream upper surface, while the center is warm carmine, making a delightful combination. Flowers are medium to large, double and moderately fragrant. Stems carry flowers erect. A splendid rose.

Edward Mawley. (McGredy, 1911.) Brilliant fiery red. Color particularly bright in fall. The opening buds are shaded velvety crimson inside. Moderately double. Quite fragrant. Very free flowering. Growth is very strong, also unusually erect and slender.

Etoile de France. (Pernet-Ducher, 1905.) Velvety crimson with bright cerise center. Buds long and borne usually singly on long, strong stems. Flowers large and full. Thrives best in warm locations.

Farbenkonigin. (Hinner, 1902.) Bright carmine overlaid with silvery gloss. Color deep at base, light toward tips. Petals two-toned. Large and full. Free blooming. Very handsome.

Florence Pemberton. (A. Dickson, 1903.) Creamy white suffused pink, particularly in center. Large, full and beautifully formed.

Franz Deegen. (Hinner, 1901.) Pale yellow with deep golden center, passing to creamy white on outer petals. A seedling of "Kaiscrin" and possessing all its merits. Medium size, fragrant.

*Gainsborough. (Good & Reese, 1903.) Creamy pink with salmon center. A climbing form of Viscountess Folkestone. Flowers very large and freely borne.

General MacArthur. (Hill, 1905.) Fiery red. In our last edition we said of this variety, "undoubtedly destined to attain the greatest popularity." Our confidence was well grounded and sales have increased every year. It has a magnificent color, is one of our very freest bloomers, possesses the richest fragrance of any rose in this section, is healthy, vigorous and not subject to mildew. Perfectly adapted to our climate.

General-Superior Arnold Janssen. (Leenders, 1912.) Deep carmine. Flowers large, double, well formed and hold their shape until they wither.

*Varieties starred are climbers.



Mrs. DAVID JARDINE

George C. Waud. (A. Dickson, 1908.) Orange vermilion. Color hard to describe, but is entirely unique and certainly most pleasing. Flowers are very large, very full and splendidly formed. Stems unusually strong, carrying flowers perfectly erect. Fragrant. A thoroughly fine variety.

George Dickson. (A. Dickson, 1912.) Deep scarlet shaded velvety crimson. The coloring is wonderfully rich, especially in half-opened flowers, the ground color red with scarlet tips, while the inside of the expanding petals is nearly black. Large, very full, with enormous petals. Fragrance is very rich. Growth extremely vigorous, almost like a climber. Moderate bloomer. Won the Gold Medal of National Rose Society of England.

Gloire Lyonnaise. (Guillot, 1884.) White, tinted lemon. Pale yellow in bud, but nearly white when open. Large.

Grace Darling. (Bennett, 1884.) Creamy white, tinted peach. Shaded crimson in the fall. Flowers of medium size, handsome and fragrant.

Grace Molyneux. (A. Dickson, 1908.) Creamy apricot with flesh center. Large, finely formed, fragrant and free blooming. A lovely rose.

Gruss an Teplitz. (Geschwind, 1897.) Rich scarlet, overlaid with crimson, particularly in spring. The ground color is intensely red, unsurpassed by any other. A wonderfully free bloomer. Growth extremely vigorous, sometimes classed as a climber. An excellent garden variety and unexcelled as a hedge rose.

Helen Gould. See Baldwin.

Hilda Richardson. (A. Dickson, 1913.) Milk white, flushed rosy lilac at tips. Entirely different from the ordinary run of roses. Flowers are small or medium, semi-double, opening to saucer-shape, with golden yellow stamens very conspicuous. Not at all adapted for cutting, but possessed of a refined, dainty elegance that with its freedom of bloom, unique coloring and delightfully rich fragrance may make it very popular as a garden rose.

His Majesty. (McGredy, 1909.) Vermilion. Has a large, long bud and opens rather flat. Fragrance very rich, suggestive of the H. P.'s. Stems long, flowers often clustered. Growth is vigorous and upright, freely branching. Might almost be placed in the H. P. division.

Honorable Ina Bingham. (A. Dickson, 1905.) Pure pink. Very large, semi-double with enormous petals. Stems strong. Very effective.

J. B. Clark. (H. Dickson, 1905.) Scarlet shaded crimson in spring, but brilliant red in fall. Very large, nearly semi-double, opening widely to show the deep yellow stamens, which contrast well with the petals. Fragrance rich. Growth very strong the petals. Fragrance rich and remarkably spreading.

John Cuff. (A. Dickson, 1908.) Carmine pink. Flowers are very large, loose and with enormous petals, about the largest we have ever seen in a rose. Free bloomer with a remarkably profuse spring crop

spring crop.

Jonkheer J. L. Mock. (Leenders, 1910.) Carmine and flesh pink. Has the wonderful two-toned petal effect shared by but two or three others. The inside of each petal is a soft, pearly blush, while the outside is bright carmine rose. As the flower opens, the outer portion shows the former shade and the high center the latter. Each petal just as it starts to curve away from center will show both tones in a way that is truly charming. Flowers are large, beautifully formed, very fragrant and borne on splendid strong, stiff stems. Will rank among the best rank among the best.

Joseph Hill. (Pernet-Ducher, 1904.) Pink shaded salmon. Buds long, flowers large, full and well-formed. Very fine.

Augusta Victoria. (Lambert. Kaiserin Augusta Victoria. (Lambert, 1891.) White faintly suffused lemon yellow. Almost universally known in California and easily the most popular white variety in this division. Flowers are large, very full and beautifully formed, with reflexed outer petals. Bush is vigorous and healthy.

(A. Dickson, 1898.) Flesh suffused double. Buds long pointed and very ree blooming. Very fragrant. Semi-double. beautiful. Free blooming.

La Detroit. (Breitmeyer, 1904.) Shell pink tinted soft rose. Color very pleasing and does not fade. Beautiful both in bud and when open. Free

Lady Battersea. (Paul, 1901.) Brilliant cherry crimson. Often called "Red Kaiserin," but does not need the assistance of any other variety. The color is beautiful and striking, buds and flowers well formed; free blooming and of vigorous growth. Even with all the above its best point is its habit of producing flowers on long, strong, almost bare stems far above the foliage, where they stand out most strikingly. most strikingly.

Lady Dunleath. (A. Dickson, 1913.) Pale yellow with deep golden center. Not among the big, bold, striking roses, but nevertheless one of the very finest in our collection. It is surpassingly graceful and dainty at every stage. The buds are remarkfinest in our collection. It is surpassingly graceful and dainty at every stage. The buds are remarkably long pointed and slender, with noticeably elongated, narrow sepals. Open flowers are cupped and as the bloom expands the color greatly deepens. Stems are very long and slender, but strong enough to carry the flowers. Free blooming and delightfully fragrant.

Lady Ursula. (A. Dickson, 1908.) Flesh pink. Flowers large, full and beautifully formed; center high with reflexed petals. Tea scented.

(Guillot, 1867.) Pink, tinted silvery Flowers large and borne freely. Delight-fragrant, excelling nearly all others in this ct. One of the great favorites.

Liberty. (A. Dickson, 1900.) Crimson scarlet, fine, free, continuous bloomer. Flowers med sized, well formed and richly colored. Excel for forcing as well as for planting out. A fine "around" variety. Flowers medium olored. Excellent

Madame Abel Chatenay. (Pernet-Ducher, 1895.) osy carmine tinted salmon. Flowers are large, exquisitely formed and charmingly colored is vigorous, with rich, heavy, dark foliage. free flowering. Particularly fine.

Madame Caroline Testout. (Pernet-Ducher, Madame Caroline Festout. (Pernet-Ducher, 1890.) Bright pink. Almost too well known on the Pacific Coast to require description. The official city flower of Portland. Flowers of the largest size and beau-tifully formed. Free blooming, vigorous and mully formed.

*Madame Driout or Striped Reine Marie-Henriette. (Thiriat, 1904.) Deep rose, striped cherry red. As good as Reine Marie-Henriette in every respect. The striping is delicate, but conspicuous.

Madame Hector Leuillot. (Pernet-Ducher, 1906.) Light yellow with carmine center. Color variable;

best in fall. Buds long, petals large. Flowers full and well formed.

Madame Jenny Gillemot. (Pernet-Ducher, 1905.) Canary yellow. Saffron in bud, becoming lighter as it opens. Buds long, flowers large, cupped and well formed.

Madame Leon Pain. (Guillot, 1904.) pink, sometimes shaded salmon. Buds flowers large and cupped. Blooms freely. Buds pointed, excellent, with plenty of dark, glossy foliage.

Madame Ravary. (Pernet-Ducher, 1899.) Orange yellow tinted flesh and creamy buff. Color hard to describe, but very fine. Buds are coppery, short pointed. Flowers spreading, cup-shape, double, richly fragrant. Not a strong grower, but short pointed. double, richly f blooms freely.

*Madame Wagram. (Bernaix, 1895.) Pink. Called Climbing Paul Neyron, but while a good variety with large flowers, it is not entitled to the latter name, having no resemblance to Paul Neyron.

Marcella. (Paul, 1913.) Salmon flesh. Buds buff. Large, well formed and handsome. Growth strong and erect. Free and continuous bloomer.

Good for cutting.

Marquise de Sinety. (Pernet-Ducher, 1 w flushed orange. Buds are very de ellow; pointed. Open flower cupped. (Pernet-Ducher, 1906.) Buds are very deep s golden low nusned orange. Buds are very deep goden yellow; pointed. Open flower cupped, with high center. Petals large and crisp. Fragrance rich. Stems very strong, but often curiously curved. Foliage very dark and handsome. Ranks very high.

lody. (A. Dickson, 1911.) Saffron yellow primrose cdges and tips. Flowers are of Melody. with primrose cdges and tips. Flowers are of medium size, sometimes very large, particularly in fall; very double, but always opening freely into a lovely flower with reflexed outer petals and fine center. The fragrance is delightfully rich, probably unexcelled. Plant grows vigorously, has very dark green foliage, which is violet when young and mildew proof at all stages. Stems are splendid, long and slender, but stiff. In all it comes pretty close to perfection as a rose and is a remarkably free bloomer, too.

free bloomer, too.

Milady. (Pierson, 1913.) Crimson scarlet. Color similar to Richmond. Flowers large, full and well

similar to Richmond. Flowers large, full and well formed, carried on good, stiff stems.

Mildred Grant. (A. Dickson, 1901.) Silvery white flushed delicate pink. By far the largest variety in this section and easily the largest rose of good form. In spite of their great size and weight, the flowers are borne perfectly erect, as stems are amply stiff and strong. There is nothing coarse about it as with some large kinds. Its only drawback is a susceptibility to mildew, but fortunately that is easily checked and magnificent blooms can be grown.

Miss Kate Moulton. (Hill 1907) Pink finted

Miss Kate Moulton. (Hill, 1907.) Pink, tinted silvery flesh. Almost faultlessly formed. Outer petals very large and most strongly reflexed, while inner petals maintain a high, pointed center. Quite a free bloomer. Superlative in form and excellent in other respects.

Mrs. Aaron Ward. (Pernet-Ducher, 19, w, tinted salmon rose. Color variable. 1907) low, tinted salmon rose. Color variable. In spring it is nearly white outside, with blush or light salmon center. In fall the color deepens to a good yellow. Very handsomely formed and carried on strong stems. strong stems.

Arthur Robert Waddell. (Pernet-Ducher, 1908.) Orange pink or reddish salmon, outer petals flesh. Of medium size and semi-double. Highly colored and very free blooming. Foliage dark,

flesh. Of medium size and semi-double. Highly colored and very free blooming. Foliage dark, glossy green. Growth moderate.

Mrs. Charles Hunter. (Paul, 1912.) Cerise, nearly red. Buds short pointed; open flowers have all petals reflexed. Stems carry flowers perfectly erect. Very free blooming both spring and fall. Growth moderate, freely branching.

Mrs. Charles Russell. (Montgomery, 1912.) Rosy carmine with scarlet center. One of the very best and of American origin. Color is brilliant and pleasing. Flower is beautifully formed, with petals of wonderful substance. The stems could not be better and flowers always come singly.
grand as a cut flower.
Mrs. David Jardine. (A. Dickson, 1908.) Simply

Mrs. David Jardine. (A. Dickson, 1908.) Bright rose pink, faintly suffused salmon. Large and very beautifully formed both in bud and fully opened flower, which retains its form to the very last. An unusual feature is that every petal is slightly frilled or wavy on the edges. Flowers come singly on fine, long, strong stems. Very fine.

^{*}Varieties starred are climbers.

HYBRID TEA ROSES-Continued

Mrs. George Shawyer. (Lowe & Shawyer, 1911.) Brilliant rose pink. Almost solid color. Large, full and well formed. Highly recommended for forcing.

and well formed. Highly recommended for forcing, Mrs. Muir Mackean. (McGredy, 1912.) Ruddy cerise. Buds red shaded dcep crimson. Very long pointed in bud, elongated cup-shaped when open. Color much like American Beauty. The flowers last well and expand very slowly, attaining unusually large size while still in bud form. Stems long and strong. Production free.

*Mrs. Robert Peary. See Climbing Kaiserin Augusta Victoria.

Mrs. Sam Ross. (H. Dickson, 1912.) Flesh, suffused salmon and underlaid with buff. Color hard to describe, but delicate, unique and very pleasing. Flowers cupped, with outer petals slightly reflexed. Best in fall.

Mrs. Theodore Roosevelt. (Hill, 1903.) Flesh pink; outer petals creamy white. Open flowers large, full and very well formed. Color delicate, but is held well.

Mrs. Wakefield Christie-Miller. (McGredy, 1909.) Rosy carmine, outer petals soft pearly blush.
Among over three hundred varieties exhibited by us at the 1915 Exposition Rose Show, none attracted more attention than this. Buds and flowers are extremely large, borne perfectly erect on grand stems. Petals have the two-toned effect described under Jonkheer J. L. Mock. Bush is healthy and vigorous. Certainly a grand rose.

Mrs. Wallace H. Rowe. (McGredy, 1912.) Bright "sweet-pea mauve." So termed by its introducer. Shade is very unusual, but runs toward pink with us. Flowers of good size and well formed. Growth is vigorous. Runs close to the H. P. class.

Mrs. W. J. Grant. See Belle Siebrecht.

My Maryland. (Cook, 1909.) Bright pink. Fragrant and free blooming. Growth strong.

Nerissa. (Paul, 1912.) Pink, flushed carmine; buds cream, flushed salmon. Coloring resembles Antoine Rivoire. Buds sharply short pointed; open flowors beyerbich. flowers have high center with reflexed outer petals.

Old Gold. (McGredy, 1913.) Coppery orange. The long, slender, pointed buds are vivid orange red, tinted apricot. Semi-double with about two rows of petals. Very fragrant; free bloomer; folirows of petals. Very magnetic that age dark, glossy green. Its wonderful coloring and simplicity of form are sure to win a host of ad-Its wonderful coloring and

Ophelia. (Paul, 1912.) Salmon flesh shaded rose with chamois center. A rose that is lovely at every stage. The buds and flowers are beautifully formed stage. The bads and nowers are beautifully formed and colored, enhanced by rich veining on the petals. Stems are long and carry flowers erect. Could hardly be praised too highly.

Perle von Godesburg. (Lambert, 1902.) White tinted creamy yellow. Same as "Kaiserin" except a little yellower.

Pharisaer. (Hinner, 1902.) Silvery pink, faintly suffused salmon. Buds long pointed. Open flowers large, with pointed center and reflexed outer petals. The latter arc of unusually good size. Stems excellent. Blooms moderately in spring and heavily in fall. in fall

Prince de Bulgarie. (Pernet-Ducher, 1902.) Silvery flesh shaded rosy salmon. Flowers large and handsome at all stages. Has won its place among the good sorts.

Queen Mary. Queen Mary. (A. Dickson, 1913.) Creamy ground, brilliantly penciled and flushed cerise, with an underlying shade of yellow. Combination of colors is wonderful and almost impossible to describe. Buds are long and pointed, with an unusual spiral form and recurved tips. Open flowers are semi-double, loose and spreading, medium sized, fragrant and freely borne.

Radiance. (Cook, 1909.) Soft carmine pink. Flowers are large and cup-shaped, unusually elongated, very double, sweetly scented. Growth vigorous and erect, with spreading branches. Blooms frecly. Well liked.

Red La France. See Duchess of Albany.

*Reine Marie-Henriette. (Levet, 1878.) Cherry red. A great favorite among the climbers. Flow-ers are very large, full, freely borne, attractively colored and fragrant. Would be almost perfect

*Varieties starred are climbers.

except for its tendency to mildew during the early part of the season.

*Reine Olga de Wurtemburg. (Nabonnand, 1881.)
Dazzling red. Flowers large, semi-double and borne in great profusion. Foliage especially handsome. Thrives exceptionally well under the trying conditions around San Francisco Bay.

Rhea Reid. (Hill. 1908.) Crimson scarlet. rich and satisfying. Flowers large, double and as fragrant as La France. Petals velvety. A splendid addition to the limited number of good reds in

Richmond. (Hill, 1905.) Scarlet, lightly shaded crimson. In the bud this closely resembles Liberty, but as the flowers open the color is better retained. The coloring of half-opened flowers is very rich. Blooms freely and has good fragrance.

Rose Queen. (Hill, 1911.) Intense pink of about same shade as Mad. Caroline Testout, but with yellow at base of petals. Buds are beautifully formed and borne on long stems. Particularly good for cutting.

Souvenir de Wooton. (Cook, 1890.) Bright crimson. Flowers large, rather loose. Delightfully sweet scented. Growth strong. Blooms freely.

Souvenir du President Carnot. (Pernet-Ducher, 1895.) Rosy flesh, sometimes nearly white. Fine buds on long stems. Flowers large. Very free bloomer.

*Striped Reine Marie-Henriette. See Madame

Sunburst. (Pernet-Ducher, 1912.) Yellow shaded coppery orange. Outer petals lighter. It is large, magnificently formed and richly tea-scented. Color is often very light in spring, but glorious in the fall. Form is long cup-shaped when fully expanded. No other yellow in this division jumped into popularity so quickly. Superb.

into popularity so quickly. Superb.

Verna Mackay. (A. Dickson, 1912.) Fawn suffused sulphur. In bud stage it is amber yellow, slightly ruddy outside. The buds are pointed and spiral. Open flowers are of medium size and only moderately double, showing the odd red stamens. Fragrance is delightful; we know of none better. Color shading is very beautiful; in fact, its exact tint is so far not duplicated in any other variety. Its charm is due to its simplicity and daintiness rather than to any bold effect. Our experience while testing it was that the more we saw of it the better we liked it.

Viscountess Folkestone. (Bennett, 1886.) Creamy pink shading to a salmon center. Blooms freely. Flowers large and fragrant.

White Killarney. (Waban Co., 1909.) White. Identical except in color with Killarney, from which it is a sport.

Winnie Davis. (Nanz & Neuner, 1902.) Flesh pink, outer petals silvery blush. Buds long pointed; flowers large and formed much like Clara Watson or Miss Kate Moulton. Not very double. Growth vigorous, erect and slender. An extremely heavy bloomer, particularly in spring.

TEA ROSES

Formerly this class had a monopoly on the so-called "tea-scent," which was one of their most distinctive characters, but now by repeated hybridizing many of the Hybrid Teas possess the same fragrance fully developed. As a general rule, to which as usual there are exceptions, their growth is very slender and not so very vigorous. Foliage is almost always very glossy. Their tendency is to bloom continuously. They require considerable pruning, good soil and proper care, but will well repay all the care and attention they receive.

Anna Ollivier. (Ducher, 1872.) Cream, shaded carmine at base. Coloring is conspicuous in bud stage, making variety unmistakable.

Beaute Inconstante. (Pernet-Ducher, 1893.) Beaute Inconstante. (Pernet-Ducher, 1895.) Copper red, shaded carmine and yellow. Colors are beautifully blended and form a very unusual combination. Handsome in bud and even more so when opened as the coloring shows then to best advantage. Semi-double. Very free blooming.

Bon Silene. (Hardy, 1835.) Salmon rose, often flushed carmine. Remarkably handsome in bud and an unusually free bloomer. An old favorite.

Bridesmaid. (Moore, 1893.) Clear bright pink. Very full and well formed. A sport from Catherine Mermet and very similar except in color. Beautiful and popular.

Catherine Mermet. (Guillot, 1869.) Pink shading to amber in center. Flowers are large and well formed. Free bloomer.

*Climbing Bridesmaid. (Dingee.) Pink. A climbing form of the beautiful and popular Bridesmaid, having larger flowers. Liable to mildew in some sections.

*Climbing Devoniensis. (Pavit, 1858.) Creamy white with blush center. Large, double and intensely fragrant.

*Climbing Niphetos. (Keynes, 1889.) Pure white. Flowers larger than in the bush variety.

*Climbing Papa Gontier. (California, 1901.) Rosy crimson with carmine center. All that its name implies. Flowers identical with the bush variety except that they are somewhat larger. Blooms very freely; growth remarkably strong. An admirable free-blooming climber.

*Climbing Perle des Jardins. (Henderson, 1891.) Deep golden yellow. Flower same as in bush variety.

*Climbing Pink Cochet. (Howard & Smith, 1913.) Rose pink with lighter center. Growth extremely strong. Flower identical with the very popular bush form.

*Climbing White Cochet. (Needle, 1911.) White tinged pink. Flowers are indistinguishable from bush form. Growth rampant.

Dr. Grill. (Bonnaire, 1886.) Coppery yellow tinged rose. Buds long and pointed. Grows strong and blooms freely. Excellent.

*Duchesse d'Auerstaedt. (Bernaix, 1888.) Light yellow shading to nankeen at center. Strong climber, with foliage and habit much like Marechal Niel. Fragrant and fairly free bloomer.

Duchesse de Brabant. (Benede, 1857.) Soft rose, Widely known as "Duchess" and highly prized for its wonderful freedom of bloom.

Francisca Kruger. (Nabonnand, 1879.) Deep chamois, shaded peach pink. Buds particularly

*Gloire de Dijon. (Jacotot, 1853.) Fawn, tinted salmon and rose. Fragrant and free blooming. One of the hardiest Teas. An old friend that is still esteemed

Golden Gate. (Dingee, 1892.) Creamy white, tinted yellow and rose. Particularly fine in bud.

Harry Kirk, (A. Dickson, 1907.) Creamy yellow with bright amber center. Buds are much deeper in color and long pointed. Open flowers are fairly double, saucer-shaped and large. Fragrance is exceptionally fine. It is an exceedingly heavy bearer. Bush grows vigorously, branches freely and has rich, dark, glossy green foliage. About the best light yellow in this division.

Helen Good. (Good & Reese, 1906.) Delicate yellow, suffused pink. A sport from Maman Cochet, which it resembles in size, form and habit.

Improved Rainbow. (Sievers, 1895.) Carmine, rose and flesh. Similar to Rainbow, but larger and with the variegation in numerous small flecks instead of broad stripes.

Ivory (Am. Rose Co., 1902.) Pure white. A sport from Golden Gate; identical with it except in color.

Lady Hillingdon. (Lowe & Shawyer, 1910.) Deep apricot yellow. The color is solid without any shading and absolutely unique. It can be told at a glance from any other rose known. A wonderful thing about it is that even after the flower is cut the color will deepen. It never fades. The new wood and long stems are deep violet, making a contrast with the flower that has to be seen to be appreciated. Growth is strong and vigorous. Foliage at first dark violet, becoming a very deep green with slight violet hue. Flowers are large and loose, with long, pointed buds and remarkably large petals. The finest yellow rose to date, in our opinion.

Madame Chedane Guinoisseau. Clear canary or lemon yellow. Quite distinct in color. Flowers of medium size and loose. Unusually free bloomer.



PAUL NEYRON See page 94

An old variety, but too good to drop. Origin un-known.

Madame de Watteville. (Guillot, 1883.) Salmon white, flushed and bordered rose. Flowers of medium size, finely formed and very fragrant.

Madame Hoste. (Guillot, 1887.) Canary yellow, deepening to golden yellow in center. Grows vigorously. Well liked.

Madame Lambard. (Lacharme, 1877.) Bronzy rose, tinted salmon or fawn and shaded carmine. Color decidedly variable. Flowers large, full and fragrant. Free bloomer.

Madame Vermorel. (Marie, 1901.) Coppery yellow, shaded rose. Buds salmon rose, deepening as they expand.

Madame Welche. (Ducher, 1878.) Pale yellow with deep orange center. Flowers large and very double.

Maman Cochet. (Cochet, 1893.) Deep rose pink on outer petals, but very light in center. Buds extremely large and beautifully formed, with outer petals well reflexed. Being very full, they hold their form until withered. Magnificent in every way except that stems are not quite strong enough for such large flowers. One of the most popular varieties in California and generally known as "Pink Cochet."

*Marechal Niel. (Pradel, 1864.) Deep golden yellow. Doubtless the best known yellow rose. Flowers very large and full, beautifully formed and most deliciously fragrant. Its classification has always been subject to argument. Often included with the Noisettes, but has no resemblance to the rest of them and certainly conforms to the usual idea of a Tea Rose.

Marie Van Houtte. (Ducher, 1901.) Creamy yellow, tinted rose on the outer petals. Buds and opened flowers are full and handsomely formed. Growth vigorous.

Marquis de Querhoent. (Godard, 1901.) Carmine on flesh or yellow ground. Color decidedly variable. Very free bloomer. Spring flowers are only fair, but coloring in fall is very brilliant.

Miss Alice de Rothschild. (A. Dickson, 1910.) Deep yellow center with lighter edges. Buds rather light, but color deepens as they expand. Flowers are of medium size, very full, pointed in bud, cupped when open, with a rich tea fragrance.

Molly Sharman Crawford. (A. Dickson, 1908.) Pure white or with a faint greenish tinge. Of medium size, well formed and fragrant.

Mrs. Herbert Hawksworth. (A. Dickson, 1912.) Creamy white, light yellow at base. Straw color in bud. The open flowers are particularly beautiful owing to their unusual globular, cup-shaped formation, with tips of petals slightly recurved. Fragrance is very sweet. Stems are fairly good; flowers nod slightly.

Mrs. Myles Kennedy. (A. Dickson, 1906.) Delicate silvery white shaded buff, with pink center. Large, full and finely formed.

^{*}Varieties starred are climbers.

TEA ROSES-Continued

Co., 1906.) Niles Cochet. (California Nursery Niles Cocnet. (California Nursery Co., 1996,) Cherry red on outer petals, lighter within. A sport from the popular Maman Cochet and a far better rose. The pink of the latter is replaced by a bright red, which at some seasons becomes decidedly brilred, which at some seasons becomes decidedly brilliant. The flowers are just a trifle smaller. Stems are better, carrying flowers fairly well. It is a remarkably free bloomer, particularly in the fall, at the very time when its color is at its best. Succeeds splendidly as a "standard" as well as in bush form. Was sold for a few seasons under name of Red Maman Cochet, but was thought deserving of a more distinctive title, as it is not, strictly speaking. a red rose.

Niphetos. (Bougere, 1844.) Nearly pure w Faintly lemon tinged in center. Buds long pointed. Growth rather weak. Blooms freely.

Papa Gontier. (Nabonnand, 1883.) Rosy crimson with carmine center. Only moderately double, but has most beautiful buds. One of the freest blooming roses known. Perfectly adapted to California conditions and probably is still the most popular variety in the State.

Deep golae... Flowers Perle des Jardins. (Levet, 1874.) Deep golden yellow. Buds are very large and full. Flowers beautifully formed, even when fully opened. Deliciously fragrant. Although over 40 years old, it is today probably the yellow variety being most widely planted in California.

Rainbow. (Sievers, 1891.) Pink, striped carmine and buff. A sport from Papa Gontier. Identical except for the striping.

Red Maman Cochet. See Niles Cochet.

Safrano. (Beauregard, 1839.) Saffron in bud, changing to pale yellow. Large and semi-double. Buds very beautiful. Free bloomer. Old, but as popular as ever.

Sunset. (Henderson, 1884.) Golden amber with a faint ruddy tinge. A sport from Perle des Jardins and the equal of that fine variety. The new foliage is very beautiful, a deep coppery red.

The Bride. (May, 1885.) White, Sometimes the flowers are pure white throughout, but usually when grown outdoors the outer petals are tinged pink. Unsurpassed in form, fragrance and free-blooming habit. A sport from Catherine Mermet.

White Maman Cochet. (Cook, 1897.) White with outer petals blushed. The largest of all the Cochet roses. Buds and flowers magnificently formed and borne very freely. Like Maman Cochet, the stem is too weak for the enormous flowers. Otherwise almost faultless.

Yellow Maman Cochet. (Buatois, 1898.) Light yellow edged rose. Not a sport from Maman Cochet and not entitled to the name it bears. It has better stems, but in all other respects is inferior to the true Cochets.

HYBRID PERPETUAL ROSES

The name of this class is somewhat misleading. All are supposed to bloom, not only in the spring, but at intervals throughout the summer and fall. This varies from some sorts that bloom almost continually to others which have but few flowers after the main crop. They are all extremely hardy and resistant to cold, enduring a much lower temperature than either of the foregoing groups. Growth is usually vigorous and upright, often with long, unbranched canes. Stems are always strong, frequently very long, and flowers are usually borne erect. Foliage is rough and entirely without the glossy surface so pronounced in the Teas. The fragrance is likewise distinct, readily recognized, but hardly possible to They drop their leaves and become describe. thoroughly dormant during winter.

This class was originated about 1835 by crossing the old Damask Perpetual Rose with the Bourbons. Since then all sorts of crosses have brought new blood into the group.

*Varieties starred are climbers.

American Beauty. (Ledechaux, 1875.) Deep rose. Originated in France, where it never became very well known; then imported to this country, renamed and achieved an unequaled popularity, which is still maintained. This was all due to its success under glass, which still continues. It does not amount to much outdoors except for a few good flowers in the fall. Was originally named Madame Ferdinand Lovel. Jamin.

Anna de Diesbach. (Lacharme, 1858.) pink. Flowers are large, of strong texture and beautifully colored. Has the fragrance of the class well developed.

Baroness Rothschild. (Pernet, 1867.) Pale rose, tinted white. Beautifully formed, grows vigorously. Without fragrance, but fine in all other respects.

Black Prince. (Paul, 1866.) Dark crimson, nearly black. Flowers globular.

Earl of Dufferin. (A. Dickson, 1887.) Velvety crimson. Has all the points of a first-class rose—good size, form and fragrance. Is also healthy and a free bloomer.

Empereur du Maroc. (Guinoisseau, 1858.) Very ark velvety maroon. Flowers of medium size, dark velvety maroon. rather flat and borne freely. Growth moderate.

Fisher Holmes. (Verdier, 1865.) Scarlet, shaded crimson. Coloring is very brilliant. Flowers large and handsomely formed. Very good.

Frau Karl Druschki. (Lambert. Frau Karl Druschki. (Lambert, 1900.) Snow white. Flowers extremely large, yet beautifully formed. Blooms six inches broad are nothing uncommon. Growth is strong and vigorous, with abundant foliage. It is one of the very best bloomers in this division. Superb. Sometimes called White American Beauty.

General Jacqueminot. (Roussel, 1853.) Brilliant red. Very popular and likely to remain so. Flowers large and fragrant.

George Arends. (Hinner, 1910.) Delicate pink. A large, handsome rose of solid color and good form. Widely heralded as "Pink Frau Karl Druschki," but does not look like a sport from that variety. Growth is so rampant that it could easily be trained up as a climber and maybe should be classed as such.

Gloire de Chedane Guinoisseau. (Guinoisseau A truly magnificent red. Considered by many son. A truly magnineent rea. Considered by many good judges superior to Ulrich Brunner, which is saying a good deal. It is probably at least as good and under some conditions better. In any event it is a splendid rose of large size, brilliant color and beautiful form.

*Gloire de Margottin. (Margottin. 1887.) Daz-zling red. Flowers fragrant, very large, full and symmetrically formed. Growth fairly vigorous. Bears a good crop of magnificent blooms.

Hugh Dickson. (H. Dickson. 1904.) Brilliant crimson. tinted scarlet. A thoroughly fine rose. Has been fully tested in this climate and found perfectly adapted to it. Has large, finely formed, fragrant flowers; blooms well and is healthy and

Jubilee. (Henderson, 1898.) Deep crimson, shaded maroon; almost black.

Mabel Morrison. (Broughton, 1878.) White, outer petals pink. Flowers very full.

Magna Charta. (Paul, 1876.) Rosy red. Flowers very large, full and fragrant. Grows vigorously and blooms freely.

Margaret Dickson. (A. Dickson, with flesh center. Petals large and of firm texture. Quite fragrant.

Mrs. John Laing. (Bennett, 1887.) Shell pink. Easily one of the best pinks in this division. Flowers are beautifully formed, finely colored, extermely fragrant and borne freely on strong stems. Splendid for cutting. A thoroughly good variety.

Mrs. R. G. Sharman Crawford. (A. Dickson, 1894.) Deep rosy pink, tinted pale flesh. Flowers large, handsomely formed and borne freely.

(Levet, 1869.) Dark rose. The ultivation. The buds are as large Paul Neyron. largest rose in cultivation. The buds are as large or larger than the best American Beauties grown under glass and are borne freely in the open ground. As an outdoor rose it far excels American Beauty, for which it is often mistaken. Growth is strong and vigorous.

Pink American Beauty. See Queen of Edgely. Pink Frau Karl Druschki. See George Arends.

Prince Camille de Rohan. (Verdier, 1861.) Deep velvety crimson. Flowers large and moderately full. Still ranks as one of the best dark red H. P's.

Queen of Edgely or Pink American Beauty. (Floral Exchange, 1897.) Pink. Sport from American Beauty. Just the same, except much lighter

Ulrich Brunner. (Levet, 1881.) Cherry red. A truly magnificent rose. The color is bright and beautiful. The stems are long, raising the large, perfectly formed flowers well above the foliage. Thrives to perfection under our conditions and certainly should be included in every collection.

White American Beauty. See Frau Karl Druschki.

PERNETIANA ROSES

The most recent class of roses. Originated by J. Pernet-Ducher, of Lyons, France, as the result of a cross between Persian Yellow (Austrian Briar) and Antoine Ducher (Hybrid Perpetual). His first introduction from this cross was Soleil d'Or, sent out in 1900.

It is a truly wonderful group and the startling color effects obtained in the handful of varieties to date is doubtless only a foretaste of what may be expected in the future.

For many years progress in roses, while steady, has been slow, with few distinct breaks from what had been accomplished previously. But here we have colors hitherto absolutely unknown in roses, striking combinations and contrasts, a distinct kind of foliage, and, in one of the most recent sorts, a freedom of bloom not equaled by any other rose of high rank. All are decidedly thorny, some extremely so.

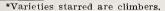
Possibly due to professional jealousy, some prominent rose specialists refuse to accept the name Pernetiana, so these roses will often be found under title, "Hybrid Briars." There is also a tendency to include some of them in the Hybrid Teas. We follow Pernet-Ducher's own classification of varieties, as it seems only reasonable to assume that, having originated the class, he is competent to judge. However, all below doubtless contain Tea blood except Beaute de Lyon, Juliet and Soleil d'Or.

(The colors in this class are so unusual, with often many different shades and tones as well as entirely distinct colors blended or combined in one flower, that it is almost an impossibility to describe them adequately. In most cases it is really necessary to see the flowers to appreciate the coloring.)

R. Goodwin. Arthur R. Goodwin. (Pernet-Ducher, 1907.) "Reddish coppery orange fading to salmon rose" (Pernet-Ducher); with us, apricot flushed salmon, fading through shrimp pink to flesh. Very rich indeed. Petals are very numerous and narrow, all strongly reflexed when the medium-sized flower is fully developed. Very free bloomer. Plant said to be vigorous, but with us practically a dwarf. (Pernet-Ducher,

Beaute de Lyon. (Pernet-Ducher, 1910.) "Superb coral red, lightly shaded yellow" (Pernet-Ducher). Has no resemblance whatever in color or form to any other rose. The half-developed flowers are much the same shade as a ripe tomato. The buds are curiously globular, with tips of petals overlapping; about saucer-shape when fully open. Blooms moderately. Bush is quite vigorous and terribly thorny. Certainly a most unique variety.

Daily Mail. See Madame Edouard Herriot. Juliet. (Paul, 1910.) "Outside of petals old gold, interior rich rosy red, changing to deep rose as the flowers expand" (Paul). The "old gold" is somewhere between ecru and chamois. The effect in the expanding bud stage is indeed striking; the





MLLE. CECILE BRUNNER See page 96

edges and tips of petals roll back slightly and show an intense contrast of bright cherry red against the buff shade. It is hard to believe at first sight that it really is a rose. Flowers are rather large, very double, fairly fragrant and borne in moderate quantity. Bush is handsome, growing vigorously and erect, with very dark green, glossy foliage. Exceedingly thorny.

Exceedingly thorny.

Lady Mary Ward. (McGredy, 1913.) "Rich orange, shaded deeper apricot orange, with a decided metallic veneering" (McGredy). His description was borne out in our tests and in addition we found the petals strongly veined carmine. Another perfectly unique color combination. Buds are long pointed; flowers of medium size, with pointed center and reflexed outer petals, fairly double and apple-scented. Bears freely. Except for a weak stem, it is splendid in every way.

double and apple-scented. Bears freely. Except for a weak stem, it is splendid in every way.

Lyon. (Pernet-Ducher, 1907.) Shrimp pink or coral; center salmon shaded chrome yellow. No see ever made a quicker leap into popularity. Its color is gorgeous, form unsurpassed and fragrance delightful. Flowers are occasionally of enormous size, but always faultlessly formed. For some unknown reason the very best flowers we have ever seen were produced on "standards"; it certainly succeeds splendidly grown that way.

Madame Edouard Herriot or Daily Mail. (Pernet-Ducher, 1913.) "Superb coral red, shaded yellow at base, passing to shrimp red" (Pernet-Ducher). Neither this description nor any other will convey a just idea of the wonderful coloring. At first sight it seems artificial. The flowers are moderately large and semi-double. Buds perfectly formed and magnificently colored. This would seem to be enough for one variety, but beyond all this it has the further merit of being the freest blooming rose we have ever known. Its florifer-ousness surpasses everything else, good and bad. It is not only profuse, but continuous. The flowers do not last long, but more are always coming. Called "Daily Mail" as a result of winning gold cup offered by that paper for best new rose at international Horticultural Exposition, London. Also received the Gold Medal of the National Rose Society of England.

In our opinion, it is far and away the greatest

Also received the Gold Medal of the National Rose Society of England.

In our opinion, it is far and away the greatest rose novelty ever introduced and we are strongly inclined to think that it will become the most widely grown variety on this Coast anyway.

widely grown variety on this Coast anyway.

Mrs. Charles E. Pearson. (McGredy, 1913.) "Orange, flushed red, apricot, fawn and yellow" (McGredy). Coloring may be said to be intermediate between Lyon and Mad. Edouard Herriot. Buds are pointed; open flowers reflexed-globular to nearly flat, double and faintly fragrant. Growth moderate or rather short. Stems short, but strong, carrying flowers finely. Blooms freely and has a very high coloring. high coloring.

Mrs. Frederick W. Vanderbilt. Mrs. Frederick W. Vanderbilt. (McGredy, 1915.)
"Deep orange red, shaded bronze apricot red"
(McGredy). Here it runs more toward a salmon ground, with carmine, yellow and flesh mixed in. Buds are moderately pointed and open flowers very double, of medium size and slightly fragrant, Growth moderate and spreading. Stems short but

PERNETIANA ROSES-Continued

PERNETIANA ROSES—Continued
Rayon d'Or. (Pernet-Ducher, 1910.) Clear,
bright, intense yellow. Buds are coppery orange,
slightly flushed carmine, but open flowers have a
shade of yellow that is certainly quite distinct
from anything else. It is shown off to perfection
in contrast with the remarkable foliage, which is
a deep rich bronze green, as glossy as if varnished.
Flowers are fairly large, very double, fragrant and borne almost continuously.

Soleil d'Or. (Pernet-Ducher, 1900.) Golden yellow, shaded nasturtium red. Flowers large, very full and rather flat. Free blooming and extremely hardy, thriving readily in regions too cold for hardy, thriving read those with Tea blood.

Willowmere. (Pernet - Ducher, 1913.) "Rich shrimp pink, shaded yellow at center, with rosy carmine at edges of petals" (Pernet-Ducher). The introducer considers it an improvement on Lyon, of similar coloring, but more elegantly and slenderly formed. Our test has been very limited, and while doubtful about its excelling Lyon, we certainly consider it a very lovely variety.

POLYANTHA ROSES

Characterized by small flowers borne in usually large clusters. In most other respects there are few points of similarity. The climbers in this section are all of rampant growth and, with the exception of Climbing Cecile Brunner, bloom only in the spring.

Brunner, bloom only in the spring.

Baby Rambler or Madame N. Levavasseur. (Levavasseur, 1903.) Crimson. This is practically an extremely dwarf and continuous-blooming Crimson Rambler. Does not mildew and blooms all summer.

*Climbing Cecile Brunner. (California, 1901.) Salmon pink. Flowers identical with the bush variety. Very free bloomer; the only climber in this division that flowers after the main spring crop. Of California origin and highly prized.

*Crimson Rambler. (Turner, 1893.) Well known. Blooms but once a year. Wonderfully showy where it does well, but very subject to mildew in this

*Crimson Rambler. (Turner, 1893.) Well known. Blooms but once a year. Wonderfully showy where it does well, but very subject to mildew in this locality. Not fragrant.

Etolle d'Or. Light canary yellow. A duplicate of Mlle. Cecile Brunner except for the color. Almost unknown, but is fine and should be widely planted. Origin unknown.

See Baby Rambler. Madame N. Levavasseur. Mademoiselle Cecile Brunner. (Ducher, 1880.) Salmon pink. The clustered flowers are small, daintily formed and exquisitely colored. The little buds are especially beautiful. Blooms constantly.

A truly charming rose. Perle d'Or. (Dubreuil, Perle d'Or. (Dubreuil, 1883.) Golden yellow with orange center. Another duplicate of Mile. Cecile Brunner except for color, which is also entirely distinct from that of Etoile d'Or. A very beautiful little rose. 1883.)

*Philadelphia Rambler. (Conard, 1902.) Light crimson. An improved form of Crimson Rambler. Flowers brighter, larger and more double. Much less susceptible to mildew.

*Tausendschoen. (Schwartz, 1906.) Dencace pink, shaded rosy carmine. Produces a great mass of bloom in spring. Wood is brown and absolutely thornless; there are a few prickles on the leafstalks. Does not mildew. Rapidly attaining great populations.

(Schmidt, 1909.) quickly changing to amethyst and steel blue. The celebrated "Blue Rose" and the only near approach to that color yet attained. Flowers semi-double and borne very freely. Has a rich and unique fragrance.

*Yellow Rambler. (Lambert, 1896.) Flowers are yellow in bud, but nearly white when opened. A tremendous grower. Originally called Aglaia, but that name seems to have fallen into disuse.

NOISETTE ROSES

Also called Champney Roses, which is the name they should really bear. All are climbers and range in color from yellow to white; none red or pink. They require very little pruning.

*Varieties starred are climbers.

*Cloth of Gold. (Coquereau, 1843.) Deep yellow center, tinted sulphur toward edges. Flowers large, full and very handsome. Not a very free bloomer.

*Gold of Ophir or Ophirie. (Goubalt, 1844.) Reddish copper, tinted fawn and salmon. Flowers of medium size, cupped and very double. In Southern California this name is commonly but erroneously applied to Fortune's Yellow, which is totally different in every way.

*Lamarque. (Marechal, 1830.) White. The most popular white climber in California. Flowers borne continually and in great profusion. Has more abundant foliage than most of the other freeblooming climbers.

*Madame Alfred Carriere. (Schwartz, 1879.)
Creamy white. A Hybrid Noisette, hence hardier
than the rest of the class. Flowers are large,
finely formed and borne profusely. Growth strong
and vigorous. A very valuable variety, particularly
for Oregon and Washington.

*Marechal Niel. See Tea section.

*Onhirie. See Gold of Ophir.

*Reve d'Or. (Ducher, 1869.) Light vellow, shaded Flowers are of medium size, well formed and borne very freely.

*William Allen Richardson. (Ducher, 1878.) Orange yellow. Flowers rather small, but well formed and borne very profusely. This, with its vigorous growth and healthy constitution, makes it a valuable and popular climber.

HYBRID SWEET BRIAR ROSES

An interesting group of hybrids between the common Sweet Briar and other roses. All are climbers, but can be grown as bush roses by severe pruning. Foliage sweet-scented. Flowers single or slightly semi-double. Highly esteemed by those who prefer roses of simple form. Only description needed is color, as they are similar otherwise. Originated by Lord Penzance.

*Amy Robsart. (Penzance, 1894.) Deep rose. *Anne of Geierstein. (Penzance, 1894.)

*Green (Penzance, 1895.) Deep pink Mantle. with white center.

*Minna. (Penzance, 1895.) Creamy white.

MOSS ROSES

So called from the sepals being covered with moss-like glands. Handsome in the bud stage only.

Elizabeth Rowe. (Rowe, 1866.) Bright pink. Etna. (Laffay, 1845.) Crimson, shaded purple.

Mousseline. (Robert, 1881.) White, shaded rose. Pink Moss. Beautifu moss. Origin unknown. Beautiful bright pink. Our best

CHEROKEE ROSES

A beautiful class of climbers, mainly singleflowered, with glossy evergreen foliage. Often trained on wire fencing to form hedges.

*Cherokee Double White. See Fortune's White in Miscellaneous Roses.

(Lindley, 1820.) White amens. The flowers are *Cherokee Single White. with conspicuous yellow stamens. always single, very large and fragrant. Foliage is very beautiful, being fully evergreen and rich, deep, lustrous green. Native of China and Japan, but Foliage is naturalized in the Southeastern States, whence its

*Pink Cherokee. (Hockbridge, 1909.) About the same as preceding except that flowers are noticeably larger and ruddy pink. Single.

*Ramona or Red Cherokee. (Dietrich, 1913.)
Flowers about the size of Cherokee Single White; single, cherry carmine. Young plants often bloom nearly pink, but on older plants the color is better.

IRISH SINGLE ROSES

The Irish Single Roses are attaining great popularity in California. They are apparently Teas or possibly hybrids. Very free blooming.

Irish Beauty. (A. Dickson, 1900.) Pure white with prominent golden anthers. Large and deliciously fragrant.

Irish Elegance. (A. Dickson, 1905.) Apricot, shaded orange and pink. Buds particularly handsome. Always in bloom. A great favorite.

some. Always in bloom. A great favorite.

Irish Fireflame. (A. Dickson, 1913.) Old gold, flushed with pure crimson when fully developed. Buds are very long and slender, beautifully spiral and richly colored a deep orange red with golden base. The open flowers are quite large, often five inches broad. A further color effect is obtained from the extremely long, wiry, violet-colored stems. Foliage is rich glossy green. Delightfully teascented. Remembering the prompt recognition secured by Irish Elegance, it is easy to prophesy a great future for this variety, which surpasses it in every respect.

MISCELLANEOUS ROSES

Comprises all varieties not falling into any of the preceding divisions.

Agrippina. (Bengal; Coquereau, 1832.) Rich crimson. Flowers globular, full and of medium size. Blooms continually and profusely, hence highly esteemed as a hedge rose.

Austrian Copper. (Austrian Briar; Gerard, 1596.) Nasturtium-colored. Rich coppery red on upper or inside of petals, yellow on lower or outside. Single; five petals. Although over three centuries old, it is usually taken for a new rose except by the few who know and appreciate it. It is interesting to note that the Pernetiana variety Juliet doubtless obtained its wonderful coloring from this old rose.

*Banksia Double White. (From China, 1807.)
Pure white. Flowers very double, small, violetscented and borne in almost endless profusion during spring. Branches extremely long, slender and
entirely thornless. Known throughout the State.

*Banksia Double Yellow. (From China, 1824.) Chamois yellow. Identical with preceding save for color.

*Banksia Single White. (California Nursery Co., 1900.) Pure white. A single white sport originating with us. If possible it blooms even more freely than the double type and fragrance is more intense. Otherwise identical.

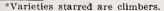
*Climbing American Beauty. (Hoopes, 1911.) Cerise red. Flowers medium size, double and possessing a rich fragrance due to its Wichuraiana blood, which is also evident in its glossy, rich foliage, doubtless mildew proof. Its name is deceiving, as it has no resemblance to American Beauty. Growth extremely vigorous.

*Dorothy Perkins. (Wichuraiana hybrid; Jackson & Perkins, 1902.) Shell pink. Blooms in spring only, when it is literally covered with innumerable dainty, pink, double flowers. Foliage is glossy, attractive and does not mildew. Sweetly scented. Very strong climber.

Empress of China. (Bengal; Jackson, 1896.) Light pink. Flowers medium size and borne in clusters. Very free bloomer and of vigorous growth. Often classed as a climber.

*Fortune's White. (Brought from China by Fortune, 1850.) Pure white. Flower of medium size, very double and borne profusely in spring only. Considered a hybrid between Banksia and Cherokee, hence often called "Cherokee Double White."

*Fortune's Yellow. (Brought from China by Fortune, 1845.) Creamy yellow, shaded orange and rose. Semi-double. Thought to be a hybrid of Cherokee and Banksia. Blooms only once a year, but that once is well worth while. There probably is no other rose that has such a profusion of bloom at one time. The color varies greatly, many different shadings appearing on one plant. It also rejoices in the following synonymous names: Beauty of Glazenwood, Hester, San Rafael and Watkins.





BANKSIA DOUBLE YELLOW

In addition to these, it is commonly, but erroneously known in Southern California as "Gold of Ophir," which is the correct name of another and entirely dissimilar sort.

Gloire des Rosomanes. (Bourbon; Vibert, 1825.) Bright red. Better known in California as "Ragged Robin." Buds produced in large clusters, but open consecutively, keeping it always in bloom. The open flowers are loose and semi-double, of no value individually, but very showy en masse. Splendid hedge rose.

Persian Yellow. (Austrian Briar; from Persia, 1837.) Bright yellow. Small but quite double. Foliage faintly scented. Particularly interesting as being one of the parents of the wonderful Pernetiana class.

*Silver Moon. (Wichuraiana hybrid; Henderson, 1910.) Pure white, single, very large. Golden stamens very conspicuous. Stems long. Foliage glossy bronze green. Remarkably strong grower. Very hardy.

Sweet Briar. The common Eglantine (Rosa rubi-ginosa), with simple, pink, single flowers and richly scented foliage.

*Wichuraiana. (Japanese species.) White. Flowers are small and single, pure white, with showy yellow stamens. They have a delightful fragrance all of their own. Foliage is deep green and very lustrous. If trained up will make an excellent climbing rose, but when allowed to grow naturally the long, slender shoots grow flat on the ground. This, with its evergreen habit, makes it fine for covering banks. Sometimes called Memorial Rose.

STANDARD OR TREE ROSES

Our Standard Roses are as fine as our bush plants, which is to say that they are the best possible. It takes a long time to grow them, and this with constant selling keeps the assortment continually changing. We give a revised list of the kinds we have in stock each season in our annual Price List.

ALPHABETICAL LIST OF ROSES

To facilitate locating any particular variety, we give a complete alphabetical list, including all synonyms in common use. All varieties starred are climbers. Abbreviations refer to preceding classes as follows:

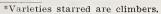
receding classes as follows.
H. T.—Hybrid Tea.
T.—Tea.
H. P.—Hybrid Perpetual.
Pern.—Pernetiana.
Poly.—Polyantha.
N.—Noisette.
H. S. B.—Hybrid Sweet Briar.
Moss—Moss.
Cher.—Cherokee.
I. S.—Irish Single.
Misc.—Miscellaneous.
Aglaia
Agrinning

Misc.—Miscellaneous.	
*Aglaia	Polv.
Agrippina	Misc.
American Beauty	H P.
American Beauty *Amy Robsart	SB
Anna de Diechach	H P
Anna Ollivion	T. T.
*Anno of Coloratoin II	
Anticol Geleistein	ъ тт
Antoine Rivoire	п. т.
*Amy Robsart H. Anna de Diesbach Anna Ollivier *Anne of Geierstein H. Antoine Rivoire Arthur R. Goodwin. Augustine Guinoisseau Austrian Copper Avoca Baby Rambler Baldwin *Banksia Double White *Banksia Double White *Banksia Single White Bardou Job Baroness Rothschild Beaute de Lyon. Beaute Inconstante *Beauty of Glazenwood Belle Siebrecht Betty Bianca Black Prince *Blue Rose Bon Silene Bridesmaid British Queen Captain Christy Catherine Mermet Charles H.	Pern.
Augustine Gumoisseau	.н. т.
Austrian Copper	. Misc.
Avoca	.H. T.
Baby Rambler	.Poly.
Baldwin	.H. T.
*Banksia Double White	.Misc.
*Banksia Double Yellow	.Misc.
*Banksia Single White	Misc.
Bardou Job	Н. Т.
Baroness Rothschild	HP
Beaute de Lyon	Parn
Regute Incometante	T
*Reauty of Glazenwood	Mico
Pollo Sight aght	TI T
Pottar	TT TT
Piones	.п. т.
Dianea Driver	· Н. Т.
*Dlack Frince	·н. ъ.
*Blue Rose	. Poly.
Bon Shene	<u>T</u> .
Bridesmaid	T.
British Queen	.н. т.
Captain Christy	.H. T.
Catherine Mermet	T.
Charles J. Grahame	.H. T.
Chateau de Clos Vougeot	.H. T.
Captain Christy Catherine Mermet Charles J. Grahame. Chateau de Clos Vougeot. *Cherokee Double White *Cherokee Single White Chrissie Mackellar Clara Watson *Climbing American Beauty *Climbing Belle Siebrecht *Climbing Belle Siebrecht *Climbing Belle Siebrecht *Climbing Capt. Christy *Climbing Ceptelle Brunner *Climbing Devoniensis *Climbing Mad. Caroline Testout. *Climbing Mad. Caroline Testout. *Climbing Mrs. W. J. Grant *Climbing Niphetos *Climbing Papa Gontier	.Misc.
*Cherokee Single White	Cher
Chrissie Mackellar	HT.
Clara Watson	HT
*Climbing American Beauty	Misc
*Climbing Relle Sighrecht	H T
*Climbing Bridgemaid	· · · · · · · · · · · · · · · · · · ·
*Climbing Capt Christy	. Er. Tr.
*Climbing Capit. Christy	.п. 1. Вода
*Climbing Deveniencia	. Poly.
Climbing Polarie Assessed Tristerie	T.
*Climbing Kaiserin Augusta Victoria	.н. т.
"Climbing Mad. Caroline Testout	. н. т.
*Climbing Mrs. W. J. Grant	.н. т.
*Climbing Niphetos	T.
*Climbing Papa Gontier	,.T.
*Climbing Perle des Jardins	T.
*Climbing Pink Cochet	T.
*Climbing Souv. de Wooton	.H. T.
*Climbing White Cochet	T.
*Crimson Rambler	. Poly.
*Cloth of Gold	N.
C. W. Cowan	.H. T.
Daily Mail	.Pern.
Dean Hole	.н. т
Dorothy Page Roberts	H.T
*Dorothy Perkins	Misc
Dr. Grill	T
Duchess of Albany	HT
Duchess of Sutherland	H T
Duchesse d'Auerstaedt	·11. m
Duchesse de Brahant	<u>T</u> .
Earl of Dufferin	т. Б.
Earl of Coctord	т. г.
Edith Port	TI T
*Climbing Mrs. W. J. Grant. *Climbing Papa Gontier *Climbing Perle des Jardins. *Climbing Pink Cochet *Climbing Pink Cochet *Climbing Souv. de Wooton. *Climbing White Cochet *Crimson Rambler *Crimson Rambler *Cloth of Gold. C. W. Cowan. Daily Mail Dean Hole Dorothy Page Roberts. *Dorothy Perkins Dr. Grill Duchess of Albany Duchess of Sutherland Duchesse d'Auerstaedt Duchesse de Brabant Earl of Dufferin Earl of Gosford Edith Part Edward Mawley Elizabeth Rowe	.H. T.
Fligsboth Down	.H. T.
Enzabeth Rowe	woss

Eart of Gosford Edith Part Edward Mawley Elizabeth Rowe *Varieties starred are climbers.

Empereur du Maroc	н. Р.
Empress of China Etna	
Etoile d'Or	Poly.
Fisher Holmes	H. P.
Florence Pemberton	н. т.
*Fortune's White** *Fortune's Yellow	Misc.
Francisca Kruger	T.
Franz Deegen	H. T.
Etolle de France. Etolle d'Or Farbenkonigin Fisher Holmes Florence Pemberton *Fortune's White *Fortune's Yellow Francisca Kruger Franz Deegen Franz Deegen Franz Jacqueminot General Jacqueminot General MacArthur General MacArthur General Sup. Arnold Janssen. George Arends George C. Waud George Dickson Gloire de Chedane Guinoisseau Gloire de Dijon *Gloire de Margottin Gloire des Rosomanes Gloire Lyonnaise Golden Gate *Gold of Ophir Grace Darling Grace Molymeux	H. T.
General MacArthur	H. P.
General Sup. Arnold Janssen	H. T.
George C Wand	H. P.
George Dickson	H. T.
Gloire de Chedane Guinoisseau	H. P.
*Gloire de Margottin	H. P.
Gloire des Rosomanes	Misc.
Golden Gate	T.
*Gold of Ophir	N.
Grace Darling Grace Molyneux *Green Mantle	H. T.
*Green Mantle	. S. B.
Harry Kirk	.н. т.
*Green Mantle	T.
*Hester	.H. T. Misc.
*Hester Hilda Richardson His Majesty Hon. Ina Bingham Hugh Dickson Improved Rainbow Irish Beauty Irish Elegance Irish Fireflame Ivory J. B. Clark	H. T.
His Majesty	. Н. Т. Н. Т
Hugh Dickson	H. P.
Improved Rainbow	T.
Irish Elegance	i. s.
Irish Fireflame	I. S.
J. B. Clark	H. T.
John Cuff	.H. T.
John Cuff Jonkheer J. L. Mock Joseph Hill	.H. T.
Jubilee	H. P.
Kaiserin Augusta Victoria	.H. T.
Killarney	.H. T.
Jubilee Juliet Kaiserin Augusta Victoria Killarney La Detroit Lady Battersea Lady Dunleath Lady Hillingdon Lady Mary Ward Lady Ursula La France *Lamarque Liberty Lyon	.H. T.
Lady Dunleath	.H. T.
Lady Mary Ward	.Pern.
Lady Ursula	. н. т.
*Lamarque	N.
Liberty	.H. T.
Mad. Abel Chatenay	.H. T.
*Mad. Alfred Carriere	N.
Mahel Morrison Mad. Abel Chatenay *Mad. Alfred Carriere Mad. Caroline Testout Mad. Chedane Guinoisseau Mad. de Watteville *Mad. Driout Mad. Edouard Herriot	T
Mad. de Watteville* *Mad. Driout	.H. T
Mad. Edouard Herriot Mad. Hector Leuillot	.Pern.
Mad. Hector Leuillot	.н. т
Mad. Hoste Mad. Jenny Gillemot Mad. Lambard Mad. Leon Pain	.H. T.
Mad. Lambard	HT
Mad. N. Levavasseur	Poly
Mad. Ravary	.н. т
*Mad. Wagram	.H. T
Mad. Welche	HP
Maman Cochet	<u>T</u>
Marcella*Marcella	.H. T
Margaret Dickson	.H. P
Marie Van Houtte	\cdots T
Marquise de Sinety	Н. Т
Melody	.H. T.
Mildred Grant	.H. T
Mad. Leinard Mad. Leon Pain Mad. N. Levavasseur Mad. N. Levavasseur Mad. Ravary Mad. Vermorel *Mad. Wagram Mad. Welche Magna Charta Maman Cochet Marcella *Marechal Niel Margaret Dickson Marie Van Houtte Marquis de Querhoent Marquise de Sinety Melody Milady Milady Mildred Grant *Minna Miss Alice de Rothschild Miss Kate Moulton Mile. Cecile Brunner	I. S. B
Miss Kate Moulton	H. T
Mile. Cecile Brunner	.Poly
В	

2 2 2	rm
Molly Sharman Crawford	T.
Mousseline	$. \mathrm{Moss}$
Mousseline Mrs. Aaron Ward	H.T.
	II T
Mrs. A. R. Waddell	D
Mrs. Charles E. Pearson	Pern.
Mrs. Charles E. Tearson. Mrs. Charles Hunter	H. T.
Mrs. Charles Russell	H. T.
Mis. Charles Russell	
Mrs. David Jardine	т. т.
Mrs. David Jardine	Pern.
Mrs. George Shawyer Mrs. Herbert Hawksworth Mrs. John Laing	HT
Mrs. Howhort Howelsonsouth	Tr.
Mrs. Herbert Hawksworth	· : : · ÷ ·
Mrs. John Laing	.H. P.
Mrs. Muir Mackean	H. T.
Mrs. Myles Kennedy	T
	n
Mrs. R. G. Sharman Crawford	н. Р.
*Mrs. Robert Peary	H. T.
Mrs. Sam Ross Mrs. Theodore Roosevelt	H. T.
Mrs. Thoodore Pensavelt	H. T.
Mrs. Theodore Roosevelt	TT 17
Mrs. Wakefield Christie-Miller Mrs. Wallace H. Rowe	н. т.
Mrs. Wallace H. Rowe	H. T.
Mrs. W. J. Grant	H T
MIS. W. J. Grant	TT TI
My Maryland	. п. т.
Nerissa	. Н. Т.
Niles Cochet	Т
Niles Cochet Niphetos	$ \hat{f T}$
Niphetos	· · · · · ·
Old Gold Ophelia	н. т.
Ophelia	H. T.
Ophirie	N
Dear Continue	
Papa Gontier Paul Neyron	I.
Paul Nevron	.H.P.
Perle des Jardins	T
Porlo d'On	Poly
rene d Oi	. I Oly.
Perle von Godesburg	н. т.
Perle des Jardins Perle d'Or Perle von Godesburg Persian Yellow	Misc.
Pharisaer	HT
Pharisaer *Philadelphia Rambler	Dolar
Piniadelpina Rambier	. Poly.
Pink American Beauty Pink Cherokee Pink Frau Karl Druschki	н. Р.
Pink Cherokee	Cher.
Pink Fran Karl Druschki	HP
Diel Man Diuschki	7.7.
Pink Moss	. Moss
Prince Camille de Rohan	H. P.
Prince de BulgarieQueen Mary	HT
Ousen Monr	TT DI
Queen Mary	п. т.
Queen of Edgely	н. Р.
Radiance Ragged Robin Rainbow	.H. T.
Ragged Robin	Misc
Dainham	TVIISC.
Rambow	
'Ramona	Cher.
Rayon d'Or	Pern.
Red Cherokee	Chor
Red La France	. н. т.
Red Maman Cochet	T.
Reine Marie-Henriette	H. T.
Reine Marie-Henriette Reine Olga de Wurtemburg	H. T.
Reine Olga de Wurtemburg	н. т.
Reve d'Or	N.
Rhea Reid	H. T.
Reve d'Or Rhea Reid Richmond	H. T.
Desc Over	II. I.
Rose Queen	н. т.
Safrano	T.
San Rafael	Misc
Silver Moon	WIISC.
Soleil d'Or	Pern.
Souvenir de Wooton	TT D3
	H. T.
Souv du Pres Carnot	H. T.
Souv. du Pres. Carnot* Striped Reine Marie-Henriette	H. T.





FORTUNE'S YELLOW

SunburstH. T.
SunsetT.
Sweet BriarMisc.
*TausendschoenPoly.
The BrideT.
Ulrich Brunner
*VeilchenblauPoly.
Verna Mackay
Viscountess Folkestone
*WatkinsMisc.
White American Beauty
White Killarney
White La France
White Maman Cochet
*WichuraianaMisc.
WillowmerePern.
Winnie Davis
*Wm. Allen RichardsonN.
Yellow Maman CochetT.
*Yellow RamblerPoly.

CROUPS

The following lists include trees and plants grouped according to various characters and for certain special purposes.

TREES AND PLANTS NATIVE TO CALIFORNIA

CONIFERS

CONIFERS.

Abies concolor (White Fir)
Abies grandis (Grand Fir)
Chamaecyparis lawsoniana (Lawson Cypress)
Cupressus macrocarpa (Monterey Cypress)
Libocedrus decurrens (Incense Cedar)
Picea sitchensis (Menzies Spruce)
Pinus coulteri (Coulter Pine)
Pinus peffreyi (Jeffrey Pine)
Pinus parryana (Parry Pine)
Pinus parryana (Parry Pine)
Pinus padiata (Monterey Pine)
Pinus radiata (Monterey Pine)
Pinus sabiniana (Gray Pine)
Pinus sabiniana (Gray Pine)
Pseudotsuga douglasi (Douglas Spruce)
Pseudotsuga douglasi (Douglas Spruce)
Pseudotsuga macrocarpa (Big Cone Spruce)
Sequoia gigantea (Big Tree)
Sequoia sempervirens (Redwood)
Sequoia sempervirens glauca (Blue Redwood)
Thuya gigantea (Giant Arbor Vitae)
Torreya californica (California Nutmeg)
Tsuga mertensiana (Mountain Hemlock)

BROAD-LEAVED EVERGREENS.

Arbutus menziesi (Madrone) Arbutus menziesi (Madrone)
Carpenteria californica
Ceanothus thyrsiflorus (Wild Lilac)
Garrya elliptica
Mahonia aquifolium (Oregon Grape)
Photinia arbutifolia (Christmas Berry)
Prunus ilicifolia (Evergreen Cherry)
Prunus ilicifolia integrifolia (Catalina Cherry)
Quercus agrifolia (Live Oak)
Rhamnus purshiana californica (Wild Coffee)
Rhamnus purshiana tomentella
Umbellularia californica (Wild Laurel)

DECIDUOUS TREES.

Acer macrophyllum (Oregon Maple)
Acer negundo californicum (Box Elder)
Aesculus californica (Buckeye)
Juglans californica (Walnut)
Platanus racemosa (Sycamore)
Quercus douglasi (White Oak)
Quercus garryana (Oregon Oak)
Quercus kelloggi (California Black Oak)
Quercus lobata (Weeping or Valley Oak)

DECIDUOUS SHRUBS.

Ribes sanguineum (Currant) Spiraea californica Symphoricarpos occidentalis (Snowberry)

MISCELLANEOUS.

Washingtonia filifera robusta (Fan Palm) Yucca whipplei Pentstemon cordifolius Romneya coulteri (Matilija Poppy)

STREET TREES

BROAD-LEAVED EVERGREENS

BROAD-LEAVED EVERGREENS

Acacia dealbata (Silver Wattle)

Acacia decurrens (Black Wattle)

Acacia melanoxylon (Black Acacia)

Acacia neriifolia (A. floribunda)

Alectryon excelsum (New Zealand Oak)

Angophora intermedia

Camphora officinalis (Camphor Tree)

Casuarina cunninghami (She Oak; Beefwood)

Eucalyptus (for roadsides)

Grevillea robusta (Australian Silk Oak)

Schinus molle (Pepper)

Sterculia diversifolia (Bottle Tree)

DECIDUOUS TREES

Acer (Maple)—all kinds
Aesculus hippocastanum (White Horse Chestnut)
Betula alba (European Birch)
Betula alba pendula laciniata
(Cut-Leaved Weeping Birch)
Catalpa bignonioides
Catalpa speciosa
Cedrela sinensis Cedrela sinensis
Fraxinus americana (American White Ash)
Fraxinus excelsior (European Ash)
Ginkgo biloba (Maiden Hair Tree)
Liquidambar styraciflua
Liriodendron tulipifera (Tulip Tree)
Melia azedarach umbraculiformis (Texas Umbrella)
Platanus orientalis (European Sycamore)
Parallus deltaides carolinensis (Caroline Paralla) Piatanus orientalis (European Sycamore)
Populus deltoides carolinensis (Carolina Poplar)
Quercus palustris (Pin Oak)
Pistacia chinensis (Chinese Pistachio)
Robinia pseudacacia (Black Locust)
Robinia pseudacacia decaisneana
(Pink Flowering Locust) Sterculia platanifolia
Tilia platyphyllos (European Linden)
Tilia tomentosa (Silver-Leaved Linden) Ulmus (Elm)—all kinds Zelkova acuminata (Japanese Elm)

TREES AND SHRUBS BEARING ORNAMENTAL RED OR ORANGE BERRIES

CONIFERS.

Taxus baccata (English Yew) Taxus baccata fastigiata (Irish Yew)

BROAD-LEAVED EVERGREENS.

Arbutus menziesi (Madrone) Arbutus unedo (Strawberry Tree) Arbutus unedo (Strawberry Tree)
Aucuba japonica
Cneorum tricoccum
Cornus capitata (Evergreen Dogwood)
Cotoneaster—all species
Eugenia uniflora Euonymus japonicus and its varieties Hex aquifolium (English Holly) Myrtus ugni Nandina domestica Photinia arbutifolia (Christmas Berry) Pistacia lentiscus Pistacia lentiscus
Pyracantha coccinea (Evergreen Hawthorn)
Pyracantha coccinea lalandi
Pyracantha crenulata
Ruscus aculeatus
Schinus molle (Pepper Tree) Viburnum odoratissimum

DECIDUOUS TREES.

Celtis occidentalis
Crataegus cordata (Washington Thorn)
Crataegus crus-galli (Cockspur)
Crataegus monogyna pauli
(Paul's Double Scarlet Thorn)
Crataegus oxyacantha (English Hawthorn)
Crataegus rubra splendens
Crataegus tomentosa
Sorbus aucuparia.(European Mountain Ash)
Sorbus aucuparia pendula Celtis occidentalis

DECIDUOUS SHRUBS

Berberis thunbergi Berberis vulgaris (Common Barberry) Berberis vulgaris atropurpurea Elaeagnus longipes Prunus tomentosa Symphoricarpos vulgaris Viburnum opulus

MISCELLANEOUS.

Asparagus cooperi Asparagus plumosus Asparagus sprengeri

TREES AND SHRUBS WITH VARIEGATED FOLIAGE

CONJEERS

CUNIFERS.

Cupressus macrocarpa variegata
(Variegated Monterey Cypress)
Juniperus chinensis argenteo-variegata
Juniperus chinensis procumbens aureo-variegata
Taxus baccata dovastoni pendula variegata
Taxus baccata elegantissima
Taxus baccata fastigiata variegata
(Variegated Irish Yew)
Taxus baccata washingtoni
Thuya orientalis argentea
Thuya orientalis argentea
Thuyopsis dolobrata variegata

BROAD-LEAVED EVERGREENS.

Aucuba japonica
Aucuba japonica maculata mascula
Buxus sempervirens aureo-marginata
Buxus sempervirens elegans variegata
Buxus sempervirens variegata
Coronilla glauca variegata
Daphne odora marginata
Deeringea celosioides variegata
Elaeagnus pungens aurea
Ligustrum seriegata
Ilex—all but two
Ligustrum gracile variegatum
Ligustrum lucidum tricolor
Ligustrum lucidum variegatum
Myrtus communis variegata
Nerium oleander "Variegated"
Osmanthus aquifolium ilicifolius argenteus
Osmanthus aquifolium ilicifolius aureus
Pittosporum tobira variegata
Veronica decussata variegata
Veronica speciosa variegata
Viburnum tinus variegatum

DECIDUOUS TREES.

Castanea sativa variegata Sterculia platanifolia variegata Ulmus campestris variegata

DECIDUOUS SHRUBS.

Hydrangea hortensis variegata Sambucus canadensis variegata

CLIMBING PLANTS.

Bougainvillea glabra variegata Hedera helix variegata

MISCELLANEOUS.

Abutilon "Eclipse"
Abutilon "Savitzi"
Abutilon "Thompson's Double"
Aspidistra Iurida variegata
Carex morrowi
Coleus
Cortaderia "Variegated"
Fuchsia "Pillar of Gold"
Miscanthus—all
Phormium cookianum variegatum
Phormium tenax variegatum
Senecio kaempferi aureo-maculatus
Zebrina pendula

HEDGE PLANTS

CONIFERS

Cupressus macrocarpa (Monterey Cypress) Taxus baccata (English Yew)

BROAD-LEAVED EVERGREENS.

Buxus japonica
Buxus japonica angustifolia
Buxus sempervirens (Box; Boxwood)
Buxus sempervirens suffruticosa (Dwarf Box)
Cotoneaster angustifolia
Eugenia myrtifolia
Ligustrum japonicum (Japanese Privet)
Ligustrum ovalifolium (California Privet)
Ligustrum rulgare (Evergreen or English Privet)
Myrtus communis (Common Myrtle)
Myrtus luma



STANDARD ROSE: FRAU KARL DRUSCHKI

Pittosporum eugenioides
Pittosporum tenuifolium (P. nigricans)
Pittosporum undulatum
Prunus ilicifolia (California Evergreen Cherry)
Pyracantha coccinea (Evergreen Hawthorn)
Pyracantha crenulata
 (Chinese Evergreen Hawthorn)
Quercus ilex (Ilex; Holly Oak)
Viburnum tinus (Laurustinus common)

DECIDUOUS TREES.

Carpinus betulus (European Hornbeam) Crataegus oxyacantha (English Hawthorn) Gleditschia triacanthos (Honey Locust)

DECIDUOUS SHRUBS.

Cydonia japonica (Japan Quince) Punica (Pomegranate)—all

DECIDUOUS TREES AND SHRUBS ASSUMING RUDDY AUTUMNAL TINTS

TREES

Acer rubrum (Scarlet Maple)
Acer saccharum (Sugar Maple)
Crataegus cordata (Washington Thorn)
Liquidambar styraciflua
Pistacia chinensis
Quercus coccinea (Scarlet Oak)
Quercus palustris (Pin Oak)
Quercus rubra (Red Oak)
Zelkova acuminata (Japanese Elm)

DECIDUOUS TREES AND SHRUBS ASSUMING RUDDY AUTUMNAL TINTS—Continued

SHRIIRS

Berberis thunbergi
Cornus florida (Flowering Dogwood)
Rhus cotinus atropurpurea (Purple Fringe)
Rhus glabra laciniata (Cut-Leaved Sumach)
Viburnum opulus
Viburnum opulus sterile (Common Snowball)

CLIMBERS.

Ampelopsis quinquefolia (Virginia Creeper) Ampelopsis tricuspidata (Boston Ivy) Ampelopsis tricuspidata atropurpurea

PLANTS OF LOW OR MEDIUM GROWTH SUITABLE FOR SHADED LOCATIONS

BROAD-LEAVED EVERGREENS.

Aucuba—all
Azalea indica
Buxus—all
Camellia japonica
Camellia sasanqua
Cotoneaster microphylla
Daphne odora
Daphne odora marginata
Erica mediterranea (Mediterranean Heath)
Fatsia japonica
Fatsia japonica varlegata
Hypericum moserianum
Mahonia—all
Michelia fuscata
Pyracantha crenulata
Rhamnus purshiana californica
Rhododendron
Veronica—all

DECIDUOUS SHRUBS.

Acer palmatum (Japanese Maple) Azalea sinensis Hydrangea—all

MISCELLANEOUS.

Aspidistra Iurida
Aspidistra Iurida variegata
Dicentra spectabilis (Bleeding Heart)
Fuchsia—all
Hibiscus rosa-sinensis
Viola odorata (Violet)
Viola tricolor (Pansy)

TREES AND SHRUBS PARTICULARLY RESISTANT TO DROUGHT

BROAD-LEAVED EVERGREENS.

Acacia—all
Agonis flexuosa
Alectryon excelsum (New Zealand Oak)
Angophora intermedia
Angophora lanceolata
Azara microphylla
Buddleia variabilis
Callistemon—all
Cassia—all
Cistus albidus
Eucalyptus—nearly all
Hakea—all
Leptospermum laevigatum
Melaleuca armillaris
Melaleuca decussata
Nerium oleander
Parkinsonia aculeata
Pittosporum phillyraeoides
Spartium junceum (Spanish Broom)

AGAVES, ETC.

Agave—all
Cordyline australis
Dasylirion—all
Yucca—all

MISCELLANEOUS.

Gerbera jamesoni hybrida (Transvaal Daisy) Malvaviscus arboreus (Turk's Cap) Pelargonium hortorum (Geranium) Romneya coulteri (Matilija Poppy)



Trainload of large Phoenix canariensis. Were planted on Palm Avenue at 1915 Exposition.

Fruit Department

(Please Read Introduction to Catalog)

The time of ripening, when given for any particular month, is based on conditions here, covering the bay country and most of the Santa Clara Valley; for other sections an allowance, earlier or later, must be made, remembering that in sections where the season of early fruit is advanced that of late kinds is usually retarded.

APPLES



The letter S, F or W following each name indicates whether it is a Summer, Fall or Winter variety

Alexander (F). Very large; greenish yellow streaked with red; medium quality; hardy and fairly productive; an excellent market sort. September.

American Summer Pearmain (S). Medium to large; oblong; striped and dotted with red; tender, juicy; early bearer. August and September.

Arkansas Black (W). Large; round; regular; smooth and glossy; yellow where not covered with deep crimson, almost black; flesh very yellow, firm, fine-grained, juicy; flavor sub-acid, pleasant, rich. A long keeper.

Baldwin (W). Large, roundish; deep, bright red; juicy, crisp, sub-acid, good flavor; very productive. November to December.

Ben Davis (W). Large, handsome, stripe of fair quality; productive, and late keeper. ber and November. Octo-

Bismarck (W). Large; yellow with red cheek; flesh tender, sub-acid. Excellent both for cooking and eating. Very prolific and comes into bearing quicker than any other kind.

Carolina Red June (S). Medium; irregular; deep red; good; very productive and early bearer. June and July.

Delicious (W). Large; ribbed and irregular; dark red where apples color well. A long keeper and of remarkably high quality in favorable locations.

Duchess of Oldenburg (S). A large Russian apple, roundish; streaked red and yellow; tender, juicy and pleasant; best early cooking apple. August.

Early Harvest (S). Medium size; pale yellow; tender, mild, fine flavor; erect grower and good bearer. July.

Early Strawberry (S). Medium size; elongated; almost deep red; tender, with a mild, pleasant flavor. July.

Esopus Spitzenberg (W). Large; tapering; light red, delicately coated with light bloom; flesh butter yellow, crisp, rich, sprightly, vinous flavor; one of the best. November to January.

Fall Pippin (F). Very large; roundish oblong; yellow; flesh tender, julcy and rich; valuable for all purposes. September and October.

Fameuse (Snow) (F). Medium size; deep crimson; flesh snow white; sprightly and agreeable; a fine dessert fruit. October.

Gloria Mundi (F). Extremely large; roundish; greenish yellow; valuable for cooking and drying. October.

Grimes Golden Pippin (W). Medium to large skin golden yellow, sprinkled with gray dots; c beautiful appearance and good flavor. December. Medium to large

Hoover (F). Large; dark red with light dots juicy, acid, crisp and good flavor. October and October and November.

APPLES-Continued

Jonathan (F). Medium to large; conical; striped, mostly red; tender, juicy, rich vinous flavor; very productive; good keeper; one of the best varieties either for table or market. October and November.

Keswick Codlin (S). Large; oblong; pale yellow; excellent for cooking; abundant bearer when quite young. August and September.

King of Tompkins County (F). Very large; yellow splashed with crimson; rich, sub-acid flavor. Vigorous grower and good bearer. October.

Lady (W). Small; flat; yellow with glossy red neek, very ornamental for dessert: flesh crisp. juicy and pleasant. November to January,

Lawver (W). Large; brilliant red with small dots; flavor moderate; long keeper; tree vigorous and hardy. December to April.

Maiden's Blush (S). Rather large; solid yellow with clear red cheek; flesh tender, white; sprightly, pleasant, sub-acid flavor; heavy bearer. August solid yellow

Marshall Red (Red Bellflower) (F). Very large, oblong; deep crimson; flesh fine grained; aromatic. September and October.

Missouri Pippin (W). Large; pale whitish yellow splashed with light and dark red; flesh whitish, crisp, moderately juicy, sub-acid. December to April.

Northern Spy (W). Large; roundish, somewhat conical; pale yellow striped with red; rich, pleasant flavor; rapid and erect grower. January to March.

Ortley (White Bellflower) (W). Large; oblong; whitish yellow; very productive; flesh white, fine grained, tender, juicy, sub-acid. December and

Rambo (F). Medium; yellowish, with dull red streaks and large dots; tender and mild flavored. October

Red Astrachan (S). Large; roundish; deep crimson; very handsome, juicy, good, though rather acid; an early and abundant bearer; the best early apple. July and August.

Red Bietigheimer (F). Large to very large; roundish; skin pale, cream-colored ground, mostly covered with purplish crimson; flesh white, firm, sub-acid, with a brisk, pleasant flavor. Early fall.

Red Cheek Pippin (W). Large, beautiful; red cheek on yellow ground; fine brisk, aromatic, subacid flavor. A great favorite in Oregon. November to March

Red Pearmain (W). Large; yellow, shaded and striped with red; flesh crisp, juicy, sub-acid. One of the best shipping apples grown in Santa Cruz County, California.

Rhode Island Greening (F). Large; slightly flattened; greenish yellow; flesh yellow, fine grained and excellent. A regular and heavy bearer in almost all localities. October to December.

Rome Beauty (W). Large; yellow striped with bright red; very handsome; flesh tender, juicy, sprightly. December to February.

(F). Roxbury Russet Large; surface covered with russet; rich, sub-acid flavor. October and November.

Skinner's Seedling (Skinner's Pippin) (F). Large; skin thin, pale yellow, often with a blush on sunny side; flesh very tender, juicy and sub-acid; tree a close, vigorous grower. Considered one of the best early fall varieties. September.

Smith's Cider (W). Large; handsome; red and yellow; juicy, acid. A vigorous grower and abundant bearer. December to March.

Stayman's Winesap (W). Large; a seedling of Winesap and considered quite an improvement; yellow, well covered with dark red; flesh vellow, sub-acid and of best quality. December to March.

Sweet June (S). Medium or below; whitish; excellent, superb tree, vigorous, upright, hardy; early and profuse bearer. August.

Tolman's Sweet (W). Medium size; whitish yellow; firm, fine grained, with a rich, sweet flavor. November to March.

Wagener (W). Medium size; deep red in the sun; flesh yellowish, very tender, juicy, excellent, high flavor. January and February.

White Astrachan (S). Very large; roundish; very smooth and nearly white: a favorite market sort.

White Winter Pearmain (W). Large; roundish, conical; pale yellow; flesh yellowish, tender and juicy with extra high flavor; one of the best. December to February.

Williams Favorite (S). Large; oblong; deep red; flesh yellowish white, mild and agreeable; a moderate grower but great bearer. August.

Winesap (W). Medium size; oblong; skin smooth, dark red; flesh yellow, firm, crisp, with a rich, high flavor; a productive bearer. November to February.

Winter Banana (W). Medium to large; golden yellow, usually shaded crimson; flesh fine grained with a very rich, sub-acid flavor. Tree healthy and vigorous. Commences bearing very young.

Winterstein (W). Luther Burbank's production. The first apple he ever sent out. It has all the good qualities and high flavor of the Gravenstein. and ripens from three to four months later in the

Wolf River (W). Large, handsome apple; greenish yellow, shaded with light and dark red; juicy, pleasant, with a peculiar spicy flavor. November.

Yellow Bellflower (W). Very large; oblong; skin smooth, pale lemon yellow, often with blush next the sun; flesh tender, juicy, crisp, with a sprightly sub-acid flavor; one of the very best. October to

Yellow Newtown Pippin (W). Large; yellow with brownish red cheek; firm, crisp, juicy, with a very rich, high flavor. Generally considered the best winter apple in California. December to March.

Yellow Transparent (S). Introduced from Russia; medium size; somewhat conical; skin clear, pale vellow; flesh white, crisp, tart and of very good flavor. Very early.

York Imperial (W). Medium size; skin whitish, shaded with crimson in the sun; flesh yellowish, firm, crisp, juicy and pleasant, mild, sub-acid. November to January.

CRAB APPLES

Hyslop. Almost as large as the Early Strawberry apple; deep crimson; very popular on account of its large size, beauty and hardiness; late; tree remarkably vigorous.

Red Siberian. Fruit small, about an inch in diameter; yellow, with scarlet cheek, beautiful; tree an erect, free grower; bears when two or three years

Transcendent. A beautiful variety of the Siberian Crab; large; red and yellow; tree a remarkably strong grower.

striped, splashed with carmine; flesh firm, juicy and flavor very pleasant.

Yellow Siberian. Large; beautiful golden yellow.

WOOLLY APHIS PROOF APPLES

The great enemy of the apple tree is the Woolly Aphis, which attacks the entire tree, but does its greatest injury to the roots. Through much experimenting it has been determined that the Northern Spy roots are entirely immune. It is a difficult and tedious process to get these roots, but we have been growing them for twenty-five years and have worked up our stock to such a point that we are able to offer a good assortment of varieties grafted on these resistant roots. This of course will not prevent the aphis from attacking the tops if they are plentiful where the trees are planted, but there they are readily controlled, while it is practically impossible to check their ravages when they attack the root system of trees on the ordinary seedling roots. The great enemy of the apple tree is the Woolly

List of varieties grafted on the aphis-proof roots is given each year in our annual price list.

PEARS



The letter S, F or W following each name indicates whether it is a Summer, Fall or Winter variety

Bartlett (S). Large; smooth; clear yellow; flesh white, juicy, buttery and highly perfumed. The most popular sort in this State; the best early variety and has no competitor for market or canning.

Beurre Bosc (F). A large and beautiful russety ort, very distinct, long neck; melting, high flavored and delicious. September.

Beurre Clairgeau (F). Very large; pyriform; yellow, shaded red; nearly melting, high flavored; one of the earliest and most prolific bearers. October.

Beurre d'Anjou (F). Large; russety yellow, often with a fine red cheek; flesh perfumed, buttery and melting. October and November.

Beurre Diel (F). Large; productive and hand-some; yellow, marked with large brown dots; flesh a little coarse grained, but rich, sugary and buttery. October.

Beurre Hardy (F). Large; cinnamon russet, with sometimes a red cheek; juicy, melting, very pleasant flavor. September.

Bloodgood (S). Medium size; yellow, dotted and streaked with russet; rich, juicy, sugary. August.

B. S. Fox (F). Of the largest size; rich, russety red; flesh fine grained, buttery, juicy, with an exceedingly pleasant sub-acid flavor; quality decidedly best. September and October.

Clapp's Favorite (S). Large; greatly resembling Bartlett; ripens a few days earlier. An excellent medium early variety.

Col. Wilder (W). Fruit medium to large; roundish, obtuse, pyriform; skin light yellow, with a shade of light orange; flesh whitish yellow, juicy, melting, very sweet, with a peculiar flavor; tree is a very vigorous grower. December to January.

Dana's Hovey (Winter Seckel) (F). Small; green-th yellow with russet dots; juicy, sweet and arotatic. One of the most valuable pears. October ish yellow matic. Or to December.

Doyenne du Comice (F). Large, pyriform; fine yellow, lightly shaded with russet and crimson; melting, buttery, rich, sweet, slightly aromatic. October.

Duchesse d'Angouleme (F). Very large, with uneven surface; dull yellow; buttery, ich, juicy and excellent; tree upright grower, very vigorous and productive. Succeeds particularly well on quince root. October and November.

Easter Beurre (W). Very large; yellowish green; fine grain; very buttery, melting and juicy, with a sweet and rich flavor. One of the best keepers. December to March.

Emile d'Heyst (W). Large, pyriform; clear yellow, brownish orange cheek; fine grained, buttery, melting, slightly vinous. October and November.

Flemish Beauty (F). Large; pale yellow, nearly covered with russet; rich, juicy, melting and sweet; very vigorous and productive. September.

Forelle (Trout) (W). Oblong, pyriform; lemon yellow, covered with dots, washed with deep red on the sunny side; flesh white, fine grained, buttery, melting, slightly vinous. October and November.

Glout Morceau (W). Large; ograined, sugary, rich. December. Large: clear vellow: fine

Howell (F). Large; light waxen yellow with small brown dots; juicy, melting, brisk, vinous; a valuable variety. September.

Kieffer (F). Large; pyramidal; skin rich golden yellow, thickly sprinkled with small dots; flesh rather coarse, with a pronounced quince flavor. Bears early; extremely prolific and the strongest grower we have. September and October. Kieffer (F).

Lawson (Comet) (S). Medium to large; crimson on bright yellow ground; flesh fine grained, juicy, rich and sweet. August.

Le Conte (S). Large; bell shaped; rich, creamy yellow when ripe; very smooth and fine for cooking.

July.

PEARS-Continued

Louise Bonne de Jersey (F). Large; yellow with dark red cheek; very juicy, with a sub-acid flavor. Sentember.

Madeline (S). Medium size; yellowish green; very juicy, melting and sweet; the earliest sort we have. June and July.

P. Barry (W). Large to very large; elongated pyriform; deep yellow, nearly covered with rich golden russet; flesh whitish, fine, juicy, buttery, melting, rich and slightly vinous; tree healthy and regular bearer. January to March.

Pound (W). Enormous; very handsome; yellow with red cheek; much esteemed for cooking; tree vigorous and productive. Among the latest to rinen.

Rossney (S). Medium to large; skin creamy yellow with crimson blush; flesh fine grained, melting, very juicy and sweet; core unusually small; strong grower; quality unexcelled; as good or better than Bartlett and ripens two weeks later.

Seckel (F). Rather small; regularly formed; yellow with russet red cheek; flesh cream color; flavor rich, spicy, unique and characteristic. Excels all other sorts in quality. September.

Souvenir du Congress (S). Resembles Bartlett, but larger; skin smooth, bright yellow when fully ripe; flesh like Bartlett, but free from the strong musky aroma, and firm to the core. August.

White Doyenne (F). Medium to large; pale yellow; fine grained; rich, high flavor. November.

Winter Bartlett (W). Large; yellow with large brown dots and slight blush on sunny side; surface irregular; size, color and shape very much like Bartlett; very valuable for sections subject to late frosts; a splendid sort in every way. Very late.

Winter Nelis (W). Medium size; dull russet; melting, juicy, buttery and of the highest flavor. Does not bear regularly in some sections. December and January.

DWARF PEARS ON QUINCE ROOTS

Pears budded on quince root become decidedly dwarfed, bear earlier and yield larger and better fruit of some varieties. Requiring only a small amount of space, they are admirably adapted to small gardens and for home use. Our annual price list gives a list of the varieties we propagate in this manner.

CHERRIES



HEARTS AND BIGARREAUS (Sweet Cherries)

Abundance. (Originated and described as follows by Luther Burbank.) "Seedling of Napoleon (Royal Amn). Tree a strong grower and an early and never-failing bearer of very heavy crops. Fully twice as productive as its parent. Fruit larger, handsomer, as firm, better form and color, sweeter and far more delicious; never cracks. Ripens one week later than Napoleon."

Belle d'Orleans. Above medium size; roundish heart-shaped; whitish yellow, half covered with pale red; very juicy, sweet and excellent. May to June.

Bing. Large; dark brown or black; very fine, late; vigorous grower with heavy foliage; a good shipping variety.

Black Eagle. Large; deep purple or nearly black; flesh deep purple; tender with rich, high-flavored juice. June.

Black Tartarian. Largest size; bright purplish black; flesh purplish, thick, juicy, very rich and delicious; tree a remarkably vigorous, erect and beautiful grower and an immense bearer; the best of the black cherries.

Burbank. (Originated and described as follows by Luther Burbank.) "The earliest of all large cherries; the largest of all early cherries, and not only the best of all early cherries, but unsurpassed by any cherry of any season."

Burr's Seedling. Large; yellow, shaded with red; sweet and rich; vigorous and great bearer.

Centennial. A seedling of Napoleon Bigarreau. Larger than its parent; beautifully marbled and splashed with crimson on a pale yellow ground; its keeping qualities render it the best shipping variety.

Chapman. Seedling of Black Tartarian; said to be larger, finer and earlier; ripens immediately after Early Purple Guigne.

Early Purple Guigne. Small to medium; purple; tender, juicy and sweet. May and June.

Elton. Large; pointed; pale yellow, nearly covered with light red; juicy, with a very rich and luscious flavor; one of the best. June.

Governor Wood. Large; light yellow, shaded with bright red; flesh nearly tender, juicy, sweet, rich and delicious; vigorous grower and very productive. June.

Great Bigarreau (Monstreuse de Mezel). Largest size; dark red, or quite black; very sweet, firm and juicy. Rather late.

Knight's Early Black. Large; black; tender, juicy, rich and excellent; high flavor. May and June.

Lambert. Large size and good quality; deep, rich red; flesh firm, and flavor unsurpassed; excellent shipping variety; regular and heavy bearer. Ripens two weeks later than Napoleon Bigarreau.

Lewelling (Black Republican, Black Oregon). Large size; cross between Napoleon Bigarreau and Black Tartarian, having the solid flesh of the former and the color of the latter. Very late and good.

Napoleon Bigarreau (Royal Ann). A magnificent cherry of the largest size; pale yellow, becoming amber in the shade, with a bright red cheek; flesh very firm, juicy and sweet. Free grower and enormous bearer.

Rockport Bigarreau. Large; pale amber in the shade, light red in the sun; half tender, sweet and good; excellent and handsome; good bearer.

Schmidt's Bigarreau. Largest size; deep black; very firm; fine flavor; good market and shipping variety. Latest sweet sort.

Yellow Spanish. Large; pale yellow with red check; flesh firm, juicy and delicious; one of the best, most beautiful and popular of all light-colored cherries. June.

DUKES AND MORELLOS (Sour or "Pie" Cherries)

Early Richmond. Red; acid; valuable for cooking; very productive.

English Morello. Large; dark red, nearly black; tender, juicy, rich, acid; productive and late.

Large Montmorency. A beautiful, large, red, acid cherry; larger and finer than Early Richmond, and fully ten days later.

May Duke. An old, well-known, excellent variety; large; dark red; juicy, sub-acid, rich.

Ostheimer Weichsel. Large; roundish oblate, slightly compressed one side; red, quite dark at maturity; stalk long; flesh liver color, tender, juicy, almost sweet, sub-acid; very good.

Reine Hortense. Very large; glossy red or deep pink, finely mottled; tender, juicy, nearly sweet, and delicious.

PLUMS

JAPANESE VARIETIES (Including Japanese Hybrids)

Abundance. Large; globular, with point at apex; showy and beautiful; bright cherry color with decided white bloom; flesh yellow, exceedingly juicy, tender and sweet; extremely early and profuse bearer; very strong grower. July and August.

America. Originated by Luther Burbank. Large, roundish oval; beautiful, glossy red; flesh light yellow, rich and delicious. July.

Apple. Originated by Luther Burbank. Large; often flat like a tomato; two and a half inches in diameter; deep reddish purple; flesh deep crimson; small pit; sweet, sub-acid, high flavor; a most delicious variety. Ripens after Burbank.

Bartlett. Originated by Luther Burbank, Medium size; oval, conical; light yellowish crimson; flesh salmon colored; flavor delicious, peculiarly like that of a Bartlett pear; tree very erect grower and bears heavily; freestone. Ripens just before Burbank.

Beauty. Originated by Luther Burbank. Large and early, ripening a week or ten days ahead of Santa Rosa. Skin crimson and freely dotted. Flesh crimson, mixed with amber. Growth is strong, vigorous and erect. Heavy and regular bearer. Colors well and develops good flavor after being picked rather green, hence a very valuable shipping plum.

Burbank. Large; rich cherry red, slightly mottled with yellow; flesh deep yellow, juicy, very sweet when fully ripe; agreeable flavor; tree vigorous grower; bears early and is extremely productive. August.

Chalco. Originated by Luther Burbank. A cross between Burbank and Simon; large, flat like a tomato; greenish purple; flesh yellow, very firm, sweet and aromatic; pit very small; excellent flavor. August.

Climax. Originated by Luther Burbank. Very large; heart-shaped; skin thick, firm, deep vermilion red; flesh yellow. A superbly rich variety. Ripens middle of July and commands the highest price in Eastern markets. Vigorous grower and very productive.

First. Originated by Luther Burbank, who states that it is the earliest of all plums. Pale green, turning ruddy; flavor insipid. Possesses little merit aside from its earliness, which is considerably exceeded by Extra Early Cherry.

Formosa. Originated by Luther Burbank. Tree is a very vigorous, upright grower with luxuriant

foliage. Fruit is very large, heart-shaped, light cherry red, with pale yellow flesh. Firm, sweet and delicious. Heavy bearer. Ripens in July, shortly after Santa Rosa.

Gaviota. Originated by Luther Burbank. Fruit nearly round, sometimes oblate; deep purplish red; flesh clear yellow, very fragrant and sweet; pit exceedingly small. Fairly early, ripening after Formosa.

Kelsey Japan. Very large; greenish yellow, covered with red on the sunny side; flesh very solid and firm when ripe; juicy and with a rich vinous flavor; pit very small. September.

Maynard. Originated by Luther Burbank. Very large, slightly ovate; red, turning purple and finally violet when dead ripe; flesh purple, firm, sweet and delicious. Good grower and heavy bearer. Ripens here in early July.

Santa Rosa. Originated by Luther Burbank. Probably the most beautiful plum known. Fruit very regular, oval, large, purplish crimson, well covered with light blue bloom; very firm, making it an excellent shipper, as it also keeps well. Flesh purplish next to skin, yellow veined pink toward pit. Heavy bearer. Extremely early. Unquestionably of very great value.

Satsuma. Fruit large, nearly round; dark red; solid color from skin to pit; firm, rather juicy, fair flavor; pit very small. Extremely productive. Late July and early August.

Sultan. Originated by Luther Burbank. Very large, elongated; red, turning to purple; clingstone; flesh firm, crimson, sweet. Strong grower.

Simon (Prunus simoni). From China. Shape and color like a tomato; flesh yellow, of a peculiar flavor; keeps a long time after picking. Tree thrifty and a very erect grower. July.

Wickson. Originated by Luther Burbank. Very large; yellow, overlaid with glowing carmine with a white, heavy bloom; flesh firm, sugary, delicious; pit small. Remarkable for long keeping. Tree vigorous and upright. August.

EUROPEAN VARIETIES

Bavay's Green Gage (Reine Claude de Bavay). Large, roundish; greenish yellow; fine flavor; highly recommended for canning. September.

Bradshaw. Very large; dark purple; juicy and good; fine early variety; almost a freestone. July and August.

Cherry. Very early; medium size; brilliant red; sweet, juicy and sub-acid. June and July.

PLUMS, European Varieties - Continued

Clyman. Large; mottled reddish purple, with beautiful blue bloom; freestone; flesh firm, dry and sweet. Valuable for shipping on account of its extremely early ripening. June and July.

Coe's Golden Drop. Large and handsome; light yellow; flesh firm, rich and sweet; adheres to the stone. September.

Coe's Late Red. Medium size; round, dark red; rich, vinous flavor; hangs on the trees a long time. October to November.

Damson. Small, roundish oval; dark purple; much used for preserves. Enormously productive. Sep-

Diamond. Very large; oval; dark purple; flesh deep yellow, juicy, with a brisk, agreeable acid flavor. It resembles Quackenboss, but is much larger. An immense bearer and one of the best shipping and preserving plums in cultivation. August.

Duane's Purple. Very large and handsome; oval; reddish purple; juicy and moderately sweet. August.

Extra Early Cherry. Originated in this nursery. Of the Myrobolan type; about one inch in diameter; bright red with yellow flesh; flavor brisk and agreeable; has ripened here May 26th and will be even earlier in most sections of California. A sure and heavy bearer with us. We have shipped the fruit several years to the San Francisco market, where,

on account of its extreme earliness and attractive appearance, it has brought the highest prices.

appearance, it has brought the highest prices.

Grand Duke. A valuable late plum; very large; dark purple, covered with blue bloom; sweet and rich when ripe. September.

Green Gage. Small; round; greenish yellow with brown dots; very juicy and sweet. Considered to have the finest flavor of the European sorts.

August August.

Imperial Gage. Medium size; oval; greenish; flesh juicy, rich and delicious. Tree very vigorous and productive; one of the best plums for canning. July and August.

Jefferson. Large, oval; yellow with a reddish cheek; flesh very rich, juicy, luscious, high flavor; parts freely from the stone; a very fine variety. August.

Peach. Very large, roundish; brownish red; coarse grained, but juicy; freestone; pleasant, sprightly flavor. July.

Red Egg (Red Magnum Bonum). Large, oval; deep red; rather firm and coarse, with a sub-acid flavor. July and August.

Washington. Very large; roundish; greenish yellow, sometimes with a pale crimson blush; flesh yellow, firm, very sweet and luscious; freestone. July and August.

Yellow Egg. Very large; egg-shaped; yellow skin and flesh; rather acid until very ripe, when it becomes sweet; clingstone. August.



Myrobolan Plum Orchard

PRUNES



Conquest. New stoneless prune. (Originated and described as follows by Luther Burbank.) "The fruit is very similar to its parent, the common French Prune, in form, size, color and golden, sweet, rich flesh. The stone has been eliminated wholly with the exception of a tiny speck. Ripens with the French Prune and is in all respects very much like it."

Fellenberg (Italian Prune.) Medium size; oval, tapering at both ends; dark purple; flesh greenish yellow, rich and delicious; freestone; fine for drying. Late.

French (Petite d'Agen). The well-known variety so extensively planted for drying; medium size, egg-shaped, violet purple; juicy, very sweet, rich and sugary; very prolific.

German. Long, oval and swollen on one side; skin purple, with a thick blue bloom; flesh firm, green, sweet, with a peculiar pleasant flavor; separates readily from the stone. September.

Giant. Originated by Luther Burbank. Fruit of immense size, as its name implies; dark crimson on yellow ground; produced in great profusion; flesh firm, rich, sweet, delicious, and excellent shipper; freestone. Tree strong, handsome grower and an early, regular, heavy bearer.

Hungarian (Grosse Prune, Pond's Seedling). Very large, dark red, juicy and sweet. Its large size, bright color, productiveness and shipping qualities render it a profitable variety for home or distant market.

Imperiale Epineuse. This has proved to be the largest and finest prune cultivated in California. With its uniformly large size, reddish or light purple color, thin skin, sweetness and high flavor, it stands ahead of all other prunes. It contains more sugar than the French Prune. Analysis shows 20.4

percent for the Imperiale Epineuse and 18.53 per cent for the average of the French Prune. Sixty to eighty per cent of the dried prunes of the Imperiale Epineuse will average 20 to 30 to the pound. Always commands the highest price in the markets.

Robe de Sargent. Medium size; oval; skin deep purple, approaching to black, and covered with a thick blue bloom; flesh greenish yellow, sweet and well flavored, sugary, rich and delicious, slightly adhering to the stone; a valuable drying and preserving variety. Dries larger and darker than French.

Silver. A seedling of Coe's Golden Drop, with which it is almost identical. Bears heavily in some but not all districts.

Standard. (Originated and described as follows by Luther Burbank.) "This is without doubt the best combination drying and shipping prune ever grown; ripens September 1st and has been kept fully a month in good condition in a basket in an ordinary living room during our warm Fall weather and can be shipped when dead ripe with success to any part of the United States. Standard Prune averages to the pound, 9.1; French Prune, 19.1."

Sugar. Originated by Luther Burbank. Extremely early, very large; ripens August 1st; cures superbly rich, with a yellow flesh, tender and rich in sugar; skin very tender, at first of a light purple, tinted with green, changing at maturity to dark purple, covered with a thick, white bloom. Valuable in localities where the French Prune ripens too late for sun-drying. Contains almost 24 per cent sugar. Tree an unusually vigorous grower and very productive.

Tragedy. Medium size; skin dark purple; flesh yellowish green; very rich and sweet; freestone. Its early ripening (June) makes it very valuable for shipping.

PEACHES

FREESTONE VARIETIES

Admiral Dewey. Large; yellow with red cheek; flesh yellow; perfect freestone; flavor good. One of the best early yellows. Ripens soon after Triumph.

Alexander. Medium to large; greenish white, nearly covered with a deep, rich red; flesh white, very juicy and sweet, with brisk, agreeable flavor. Very early.

Amsden's June. Similar to Alexander in all respects, excepting that its hardiness renders it preferable in localities where other sorts are more subject to curl. Very early.

Australian Saucer. Small, flat, hollowed like a saucer on one side, giving the name; white with red cheek; flesh white; flavor excellent. For home use only. Succeeds particularly in the southern part of the State. Early.

part of the State. Early.

Bilyeu's Late. Large; white with a beautiful blush; flesh white, very firm and of good flavor; heavy bearer and good shipper. The latest white freestone.

Briggs' May. Medium size; round; white with red cheek; flesh white, melting, juicy and very sweet. Ripens soon after Amsden. Early.

Early Columbia. A very fine early variety. Skin greenish white, well covered with red; flesh white, sweet, highly flavored and particularly delicious. Resembles Hale's Early, but ripens earlier.

Early Crawford. A magnificent, large, yellow peach of good quality. Its size, beauty and productiveness make it one of the most popular varieties both for home use and commercial planting. Medium early.

Elberta. Very large; usually elongated; skin golden yellow, where exposed to the sun faintly striped with red; flesh yellow, very fine grain, juicy, rich, sweet and splendidly flavored; tree very prolific and presents a handsome appearance. It is a perfect freestone and one of the most successful market varieties, selling usually at a higher price than any other peach.

Everbearing. Very distinct from all other sorts. Blooms and bears over a long season. Reddish purple; flesh red next to skin and around pit, making it practically a "Blood Free." For home use.

Foster. Very large; yellow with red cheek. Much like Early Crawford, but is larger, earlier and better. Runs very uniform in size. A thoroughly fine yellow freestone.

George the Fourth. Large; white with red cheek; flesh white, juicy and extremely rich; tree vigorous and bears moderate crops of the best quality. One of the best whites for home use. Medium early.

Grosse Mignonne. Large, roundish; skin greenish yellow, mottled with red; flesh yellowish white, melting, juicy, but with very rich, high vinous flavor. Early.

Hale's Early. Large, nearly round; skin greenish white, mostly covered with red and can be readily separated from flesh when fully ripe. Flesh white, nelting, juicy, sweet and most delicious; adheres partially to the pit.

Imperial. Medium size; skin very smooth, deep yellow with dark red cheek, making an unusually beautiful fruit; flesh rich and firm, with a delightful flavor; perfect freestone. In quality the best very early yellow freestone.

Late Crawford. Fruit very large, roundish; skin yellow, with dark red cheek; flesh deep yellow, juicy and melting, with a very rich and excellent vinous flavor. Mid-season.

Lovell. A California seedling; large, almost perfectly round; flesh clear yellow to the pit; firm and of excellent quality; a superb canning peach and dries well. Very prolific. Late.

Mayflower. Introduced to the Pacific Coast by ourselves a few years ago as "the earliest peach known." Results have fully substantiated this claim and it still holds that title. It is absolutely red all over, with white flesh of excellent flavor.

As large as Alexander and ripens two weeks earlier with us at Niles. Very heavy bearer and should be thinned. Many customers who tried this variety on our recommendation when first introduced have since bought heavily after fruiting it and recognizing its great value.

Morris White. Large, oval; skin white. becoming creamy or pale straw color when fully ripe, without any red whatever; a perfect freestone; flesh white clear to the dark brown pit, remarkably tender, juicy, sweet and rich. Beyond all doubt the finest flavored peach grown. A good bearer, but not a strong grower. Susceptible to curl-leaf. Midseason.

Muir. An excellent bearer, and does not curl; fruit large to very large; skin and flesh uniformly yellow clear to the pit; a fine shipper and one of the best canning peaches in the United States; as a drying peach it excels all others ever introduced. Late.

Newhall. A superb peach of very large size; skin yellow with a dark red cheek; flesh deep yellow, juicy, with rich vinous flavor; ripens about one week before Late Crawford; tree very hardy, healthy, vigorous, and not affected by curl. Midseason.

Opulent. Originated by Luther Burbank. A hybrid between Muir Peach and White Nectarine. Medium size; almost globular; skin slightly downy, creamy white with crimson dots and blushes; perfect freestone; flesh white throughout; moderately juicy; flavor combines the sweetness of the Muir with the tart of White Nectarine. Recommended by Mr. Burbank as "a fruit for home use of surpassing excellence." Ripens about ten days before Early Crawford.

Royal George. A beautiful and high-flavored peach; rather large, globular, broad; skin white with deep red cheek; flesh whitish, very red at the stone; very rich. Fairly early.

Salway. Large; yellow with crimson cheek; flesh deep yellow; very juicy, melting and rich; the most valuable late variety.

Strawberry. Medium size; oval; skin marbled with deep red; flesh whitish, juicy, rich and of a very delicious flavor.

Stump the World. A large and showy peach; skin creamy white with bright red cheek; flesh white, red at pit, juicy and high flavored. Midseason.

Susquehanna. A large, handsome variety, nearly globular; skin rich yellow with beautiful red cheek; flesh yellow, sweet, juicy, with a rich, vinous flavor. Late.

Triumph. Medium to large. Skin very downy, yellow, almost covered with red; flesh bright yellow, adhering to pit until fully ripe; flavor excellent. The very earliest yellow variety.

Ward's Late. Rather large; roundish; skin white, with beautiful crimson cheek; flesh white, juicy, rich and excellent. Very late.

Wheatland. Large and round; skin deep golden yellow, shaded win crimson, giving it a beautiful appearance; flesh yellow, juicy, with a remarkably rich, high flavor; quality the very best. Ripens between Early and Late Crawford.

Yellow St. John. A favorite Southern kind; nearly the size of Early Crawford, but of better quality; orange yellow with deep red cheek. Very early.

CLINGSTONE VARIETIES

Blood Cling. Large; skin deep claret with deep red veins, downy; flesh deep red, very juicy, vinous and refreshing; esteemed by some for pickling and preserving.

George's Late Cling. Large; yellow striped with red; flesh white, red around pit; heavy and uniform bearer.

Heath Cling. The most delicious of all cling-stones; very large; skin downy, creamy white, with a faint blush of red in the sun; flesh greenish white, very tender, and exceedingly juicy, with the richest, highest and most luscious flavor. Leaves liable to curl. Late.

Henrietta Cling (Levy's Late Cling). A most magnificent yellow cling of largest size; skin mostly covered with bright crimson; hardy, productive

covered with bright crimson; hardy, productive and ripens late.

Large White Cling. Large, round; skin white with light red cheek; flesh tender, sweet and full of juice. A great favorite for preserving in brandy and sugar. Early.

Lemon Cling. Large; lemon-shaped; yellow; flesh firm, yellow and slightly red at pit; flavor rich, sprightly, vinous and sub-acid. Mid-season.

McKevitt's Cling. Very large; flesh white to the pit; very firm, sugary and rich, with a highly vinous flavor; it bears transportation well. September.

Nichols' Orange Cling. Large; yellow with purple cheek; flesh yellow; a healthy, vigorous and productive variety, in every way worthy of extensive Mid-season. cultivation.

Phillips Cling. Large; yellow; flesh clear yellow to the pit, which is very small; exceedingly rich and high flavor. One of the best canning sorts.

Runyon's Orange Cling. Superior to the common Orange Cling, and not subject to mildew like that variety; very large; skin yellow with a dark crimson cheek; flesh yellow, rich and sugary, with a decided vinous flavor. Mid-season.

Seller's Orange Cling. A variety of Orange Cling of largest size; flesh yellow, firm, very juicy and rich. Ripens with Late Crawford.

Tuscan Cling. Large; yellow; red at pit; heavy bearer; best of all Clings; fine shipper. In great demand by canneries on account of its early ripening, as it is the first Cling to ripen.

APRICOTS



Barry. Large; orange yellow with a pink blush; skin very smooth; pit small; heavy and regular bearer, not having failed to produce crop for twenty years; ripens two weeks before Blenheim or Royal; yields one pound dried to four and a quarter pounds fresh.

(Prunus dasycarpa). Entirely Black Black (Prunus dasycarpa). Entirely distinct from the ordinary type of apricots in growth, foliage and fruit, which is tomato-shaped, dull red and slightly downy. We have fruited this for twenty-five years and find it remarkably similar to supposed hybrids of plum and apricot known as "inhuments". plumcots.

Blenheim. Above medium; oval; orange; flesh deep yellow, juicy and fairly rich; vigorous grower and regular, prolific bearer.

Hemskirke. Strongly resembles Moorpark in size and color, but differs in bearing better and ripening a little earlier and more evenly. July and

August. Large Early Montgamet. Large; reddithe sun; flesh orange yellow, very firm. reddish Ripens

one week before Royal. Moorpark. One of the largest, most popular and widely disseminated apricots; deep orange or brownish red; flesh quite firm, bright orange, parting freely from the stone; quite juicy, with a rich and luscious flavor; a favorite canning variety. In some sections a shy and irregular bearer. AuNewcastle, Medium size, round, well shaped; shade smaller than the Royal, and two to thr weeks earlier.

Oullin's Early. An early variety of the Peapricot, of large size and good quality. July.

Peach. Very large, handsome and of delicious flavor; skin deep orange, mottled with dark brown; flesh of a fine saffron yellow color, juicy, rich and high flavored. August.

Routier's Peach. Originated near Sacramento. Large, yellow in shade; deep orange mottled or splashed with red in the sun; flesh juicy and rich, with high flavor.

Royal. A standard variety; skin dull yellow, with an orange cheek; flesh pale orange, firm and juicy, with a rich, vinous flavor; equally valuable for canning and drying. July.

Sardinian. A small, very early freestone; skin white, with crimson blush; flesh clear white, julcy and very delicious; pit very small. Excellent for pickling and cating fresh. For home use only.

pickling and cating fresh. For home use only.

Sparks' Mammoth. Originated in Ventura County; largest size, larger even than Moorpark; skin pale lemon color; flesh clear yellow, very tender, juicy and sweet; highly perfumed.

Tilton. Large, oval, slightly compressed; flesh firm, yellow and parts readily from the stone; heavy and very regular bearer; seems to be more exempt from late frosts than any other varlety.

NECTARINES

Advance. Large, round; skin green on shaded parts, blotched with red and brown on sunny side; flesh greenish white, rich and sugary, with a rich flavor. The earliest Nectarine. July.

Boston. Medium; deep yellow, with a bright blush and deep mottlings of red; flesh yellow without any red at the stone; sweet, though not rich, with a pleasant and peculiar flavor; freestone.

Downton. Large; roundish oval; skin pale green in the shade, deep red in the sun; flesh pale green, melting, juicy and richly flavored. August.

Early Newington. Large, roundish; pale green, nearly covered with blotches of red; flesh greenish white, very red next the stone, to which it adheres; juicy, sugary, rich and very excellent.

Hardwicke. Very large, almost round; skin pale green on the shaded side, entirely covered with

dark purplish red next the sun; flesh greenish, melting, juicy, rich and highly flavored; a most delicious fruit and regular bearer; freestone.

Humboldt. Largest size; skin bright orange, stained, streaked and mottled with very dark crimson in the sun; flesh orange, very tender, juicy and richly flavored; one of the largest and best of all nectarines. September.

Lord Napier. Largest size; skin pale cream color with very dark crimson cheek; flesh very white, tender, melting and juicy, separating freely from the pit; regular bearer and one of the earliest.

New White (Large White). Rather large; nearly round; skin white with a light tinge of red when exposed; flesh white, tender and very juicy, with a rich, vinous flavor. The most widely planted and popular variety in this State. August.

QUINCES

Apole (Orange). Large; roundish, with short neck; beautiful bright golden yellow; an old favorite. September.

Champion. Very large; handsome; very productive; flesh tender; flavor delicate, imparting an exquisite quince taste and odor to any other fruit with which it may be cooked.

Meech's Prolific. Large; lively orange yellow; of great beauty and delightful fragrance; its cooking qualities are unsurpassed; tree a vigorous grower and immensely productive.

Pineapple. Originated by Luther Burbank. Fruit very large, apple-shaped, clear yellow; flesh very tender; can be eaten raw like an apple; makes a high-flavored jelly. It is said that it will cook tender in five minutes. Its flavor is delicious, same as that of a pineapple.

Rea's Mammoth. A very large and fine variety of Orange Quince of recent introduction; strong grower and very productive.

Smyrna. Extremely large; elongated; lemon yellow; cooks tender and has a fine flavor; long keeper; tree strong grower with heavy foliage; very prolific. Ripens with Orange Quince.

FIGS

THE SMYRNA FIG

The true Smyrna Fig is not only a distinct variety, but constitutes a distinct class, characterized by the possession of only true female flowers. The Smyrna Figs were first imported to California thirty or forty years ago and widely distributed. Although these trees grew well and attained large size, they failed to bear any mature fruit. The fault consisted in the impossibility of a proper fertilization of the female flowers. The remedy was found several years later, though most of the Smyrna trees had at that time been dug up as worthless. The sterility of the first Smyrna Figs was found to be due to the absence of male or Caprifig trees and of the minute wasps which in the old fig regions carry the fertilizing pollen from one flower to the other.

to the other.

It was not until the United States Government, through its Agricultural Department, imported the wasps or Blastophagae, that Smyrna Fig culture was made a success in California. The first importation of wasps was made some years ago, and colonies of wasps were established at Fresno and at Niles. At our nurseries these colonies have thrived well and increased to such an extent that every Caprifig is loaded with wasps. In order to start a Smyrna Fig orehard, it is necessary to plant both Smyrna Fig trees and the wild Caprifig trees. After the first or second year, when the Caprifig trees have commenced to bear, they may be supplied with colonies of wasps by simply procuring figs from our Caprifig trees, the wasps taking care of themselves afterward, perpetuating themselves year after year without any further trouble and concern to the grower.

Those having only one or two Smyrna trees will find it a circult.

Those having only one or two Smyrna trees will find it a simple matter to procure a few infested Caprifigs (fruit) each year and hang them in their Smyrna trees. We can supply these figs, usually in early August, at 50 cents per dozen or \$3.00 per hundred.

The fertilization of the fig flowers has the effect of producing superior fruits. Only by caprification through the wasps can seed be produced in the figs.

These seeds possess kernels of a highly aromatic taste, communicating this flavor and aroma to the whole fruit. Besides the Smyrna Figs, many other varieties are benefited by caprification, and a few Caprifigs may to advantage be planted in every fig orchard or in every place where common fig trees are grown.

There is but one principal variety of Smyrna Fig, the one known in Smyrna as Lob Fig. The Smyrna Fig offered by us belongs to this kind. The fig is large, flattened somewhat like an onion, with stalk and neck very short. Skin thin and of yellowish white color. Pulp and flesh amber, juicy, sweet and highly flavored, and delicious both fresh and dried. Fruit ripens continually from August to frost. The dried figs of this variety are known as the Smyrna Figs of commerce and bring in the markets of the world the highest prices.

STANDARD VARIETIES

Adriatic. Tree a strong and healthy grower; fruit above medium size; skin white and thin; pulpred, fine, exceedingly aromatic and changes to an amber color when dried.

Agen. Medium size, roundish; skin green with a brownish tinge; flesh of a dark red blood color; most delicious. Very late.

Angelique. Medium size; roundish, and flattened like an onion; skin yellow; flesh white under the skin, slightly tinged with rose toward the center. When fully ripe, the fruit is of good quality and perfumed. Early.

Black Ischia. Medium size; dark purple, almost black when ripe; flesh deep red, sweet and luscious; tree hardy; an excellent bearer.

Bourjasotte Blanche. Medium size; round and somewhat flattened; yellowish at maturity, and covered with a thin gray bloom; flesh dark blood red, thick and stiff; a good fig.

Brown Turkey. Large; pyriform; skin brownish red with blue bloom; pulp sweet and good; a very early, prolific and hardy variety.

Brunswick. Very large and pyriform; skin greenish yellow in the shade, pale brown on the other side; a very rich and excellent fig.

Celeste. Fruit large; reddish brown; flesh dark red; highly prized for table preserves and crystallizing; will dry up and improve in saccharine matter if left on the tree.

Col di Signora Nigra. Large; pyriform; dark chocolate color; flesh very dark red throughout; exceedingly rich and sugary.

Dauphine. Large; round; turbinate; skin violet red; flesh red; one of the varieties grown for the Paris market; tree very hardy and ripens its fruit well.

Doree. Medium; oblong; color bright yellow; flesh salmon rose, rich and sugary flavor.

Drap d'Or. Large; oblong; greenish yellow with a brown cheek; flesh light rose color, turns amber when fully ripe; very rich, fine-grained and sweet.

A delicious fig of medium size; skin Du Roi. yellowish green; flesh white.

Lardaro. Large; oblong; skin pale yellow with a brown cheek; flesh deep red, rich and sugary.

Madeline. Large; pyriform; skin light yellow; flesh light amber, fine-grained, rich, sugary flavor. It is a heavy bearer and ripens its crop all in two weeks' time.

Mission (California Black). The well-known local variety; fruit large, dark purple, almost black when fully ripe; makes a good dried fig; tree grows to a very large size, and bears immense crops.

Pastiliere. Large; pyriform; stalk short; skin wrinkled, dark violet, covered with bloom; very firm; pulp violet red, with rich, delicious flavor. Fine either fresh or preserved. Rather late; tree large and spreading, heavy bearer. Dr. Eisen, the noted authority on figs, says: "If the writer could plant only one blue variety, it certainly would be this one."

Ronde Noire. Large; roundish; greenish yellow, covered with dark purple; flesh amber color, fine-grained, rich and sweet.

Ronde Violette Hative. Large; roundish, oval; skin yellow, covered over with pale brown; flesh dark red, fine-grained, tender, rich. Ripens early.

Royal Vineyard. Medium size, long, pyriform; skin very thin, hairy, reddish brown or purple; flesh bright reddish, very juicy and melting.

San Pedro. Nearly round and somewhat flattened; bright, deep yellow in the sun; pulp rather coarse, but sweet; good flavor.

Warren's Brown Turkey. Very large; greenish violet; flesh rosy amber, streaked with violet. Strong grower and heavy bearer.

White Genoa. Fruit very large; yellow; rich and fine-grained. It produces large crops during the entire season until October.

White Ischia. Small; pale greenish yellow; flesh purple, highly flavored and luscious; will ripen its fruit along the coast, where the finer varieties do not mature.

White Marseilles. Medium or small; skin extremely thin, pale yellowish green; pulp amber with a delicate and delicious flavor. Tree small, but bears well. Very fine fresh or dried.

Wilson's Smyrna. Medium large; stalk short; skin thin, green with gray bloom; pulp rosy red; strong grower, with spreading habit. Like all Smyrna types, it requires caprification to set fruit.

CAPRIFICS

CAPRIFIGS

These are the wild figs which furnish the pollen by which the Smyrna Figs are fertilized through the aid of the fig-wasp (Blastophaga grossorum) that lives and breeds in the Caprifigs. Without Caprifigs the Smyrna Figs cannot be made to bear. Consequently a few Caprifigs should always be planted at the same time as the Smyrna Figs. Later on, colonies of wasps or Blastophagae may be readily established. There are many varieties of Caprifigs known, some valued for one quality, others for another. We have on our ground eighteen varieties of Caprifigs imported from Turkey, Italy, Africa and Dalmatia; the one from the latter place, known as the Milco, is unsurpassed for carrying the wasps.



TREE DIGGER DRAWN BY TWENTY HORSES

NUT TREES

ALMONDS

Drake's Seedling. Of the Languedoc class; very prolific and a regular, abundant bearer. Last to bloom.

1. X. L. Tree a sturdy, rather upright grower; nuts large; hulls easily; shells soft, but perfect.

Jordan. Introduced by us from Spain, where they are grown largely for export. The largest, sweetest and finest flavored of all; kernels have a very thin skin and are plump, filling the shell, which is hard. The flavor and texture of the flesh surpass in delicacy any other kind. Owing to their large size and thin skins, Jordan almonds are preferred by confectioners for making salted and sugared almonds. The stock we offer is all propagated from our own bearing trees that have borne full crops for many years.

King's Soft Shell. Originated in San Jose, Cal.; shell very thin and soft; regular and abundant bearer.

Languedoc. Nut large; shell thin; kernel sweet and perfect. Irregular bearer.

Lewelling. An immense bearer; tree of drooping habit; nuts large and good; hulls easily.

Ne Plus Ultra. A sturdy and rather upright grower; extremely prolific, producing its nuts in bunches all over the twigs; nuts large and long; almost invariably of one kernel; of fine flavor; hulls readily.

Nonpareil. Of a weeping style of growth, but still forms a beautiful tree; an extraordinarily heavy and regular bearer, with very thin shell.

Palatine. A "Jordan" almond sent out by Luther Burbank. Raised from imported meats and said by him to bear deliciously sweet, true "Jordan" almonds in abundance.

Paper Shell. Medium size; shell very tender, easily broken with the fingers; kernel large, white and sweet.

Texas Prolific. Nut medium size; shells perfect and well filled. As the name indicates, this is a very heavy and regular bearer. It is of the greatest value for planting with other sorts to increase their yield by aiding in pollination. Tree is a fine, strong grower.

CHESTNUTS

SEEDLING VARIETIES

American. Our native species. Nut smaller than Spanish, but sweeter. Does well in the foothills and northern counties.

Italian (Spanish). A highly ornamental and freegrowing tree with beautiful foliage. Nuts large and fairly sweet, but are not always of as large and uniform size as those from grafted trees.

GRAFTED VARIETIES

 $\mbox{\bf Early Marron.}$ Nut large and very sweet; one of the earliest chestnuts to ripen.

Fox's Prolific. A seedling originated in San Jose. Heavy, regular bearer; very few burs without nuts. Tree of rapid and spreading growth.

Marron de Lyon. A French variety; nut large, roundish, sweet and well flavored. The tree is very productive and of handsome growth.

Marron Combale. A valuable variety from France. Nut very large with peculiarly rich and sweet flavor.

Noire Hative. A very early French sort; particularly valuable on account of being first to ripen.

Numbo. A seedling of Italian. Enormously productive and bears every year; quality and size equal to any other large variety.

Paragon. Originated in Pennsylvania. Heavy bearer of large, sweet, fine-grained nuts. Tree hardy and vigorous.

Ridgely. Nut medium to large; dark; quality very good. Tree vigorous, productive and hardy.

FILBERTS

Cosford. Nut large; oblong; husk hairy; shell remarkably thin; kernel of excellent flavor. Good bearer.

Fertile de Coutard. Nut very large; broad, pointed; kernel full and highly flavored; early and abundant bearer.

Merveille de Bolwiller. Nut large; rounded at the base, tapering to a point; shell thick; kernel fine flavored.

Nottingham Prolific. Nut medium sized; obtusely ovate; shell thick; kernel full and fine flavored; tree an early and abundant bearer.

Prolific Cob. Nut very large; oblong; shell pretty thick, of a brown color; kernel full and of very rich flavor; one of the best.

PECAN

A very beautiful, symmetrical and rapid-growing tree, producing valuable timber and heavy crop of sweet, oblong, smooth nuts.

WALNUTS

Walnuts are steadily gaining in favor as orchard trees. They demand a deep and well-drained soil, but capable of retaining moisture during the summer. North of Santa Barbara only the French varieties should be planted, as they leaf out and bloom very late in the spring and thereby escape injury to the crop from late frosts. Owing to their ultimate great size they should be planted not less than 40 feet apart, and probably 50 feet is even better. Shorter lived trees can be planted in with the walnuts at the rate of three to one if the latter distance is adopted.

Success cannot be expected from poorly grown trees. Cheap trees are grown by planting nuts in the nursery row and grafting them the second year. Naturally they form only a long tap root, which is mostly cut off in digging. This is such a shock to the tree that it usually causes the center to turn black and ultimately kills it, although frequently it seems to grow well for a while

The only way to grow good trees is to grow the seedlings in beds, root-prune, transplant and grow them on for another year before grafting. When finally dug, such trees have a splendid branching root system, which quickly takes hold of the soil in their new location and insures an immediate as well as permanent vigorous growth. All our grafted walnuts are grown by this latter method and with proper care and attention a 100% stand should be obtained by the planter.

NATIVE VARIETIES

American Black. Called here Eastern Walnut. This noble forest tree grows freely on this Coast, stands transplanting well, bears early, and ought to be extensively cultivated, not alone for the nuts, but also the valuable wood it produces.

California Black. Tall, vigorous tree; indigenous to Central California; excellent shade and avenue tree; nut roundish; smaller and smoother than the American Black Walnut; kernel is sweeter and of a more delicate flavor.

VARIETIES OF "ENGLISH" TYPE

Cluster-Fruited. This variety, in habit, size, form and foliage does not differ materially from the common "English," except that it bears its fruit in large clusters.

Ford's Improved Soft Shell. This is an improved variety, originated by Geo. W. Ford, of Santa Ana, Cal. A seedling of Santa Barbara Soft Shell, but larger and of better quality.

Placentia. A selected variety of Santa Barbara Soft Shell. Nuts are all of large size and perfect shape, with smooth, soft, thin shell; kernel white and sweet. Compares favorably with the French varieties.

Santa Barbara Soft Shell. Originated by Jos. Sexton, of Santa Barbara. Tree is vigorous grower, early and abundant bearer; nut large, with very soft shell; kernel white and sweet; comes true from seed.

FRENCH VARIETIES

Characterized by their valuable habit of blooming much later in the spring than varieties in preceding class. This makes them far better adapted to the climate of all the country north of Santa Barbara; they are the only ones that should be planted throughout that region.

Bijou. Nuts two or three times as large as the common walnut; somewhat square or oblong; kernel small; mainly an oddity.

Chaberte. A most valuable variety; nuts medium size, of regular shape, with a kernel of extra fine quality. Tree very productive, developing its leaves and bloom late in the spring. One of the best with us.

Cut-Leaved. A distinct variety with large, deeply cut foliage; nuts medium size; elongated; exceptionally heavy, as the kernel completely fills the shell. Tree is a good bearer and beautiful as an ornament, in addition to the value of the fruit.

Franquette. Nuts very large, long and pointed; kernel full-fleshed, sweet and rich; buds out late in the spring. We have fruited this variety for many years, never failing to get a full crop. Probably the best French sort for commercial purposes.

Mayette. One of the best; nuts large and uniform, decidedly flattened at the base; shells light colored; tree hardy, buds out late and bears abundantly.

Mayette Rouge. A variety of Mayette; same shape and form; of large size; nut looks reddish when it comes out of the husk.

Monstreuse. Quite large, well rounded and not pointed at either end; shell very smooth; kernel fills the shell and has a very rich flavor. With us this is a heavy, regular bearer and we regard it as a very valuable variety.

Parisienne. One of the largest and best for dessert; broad and large, with very full-fleshed kernel; bears early and regularly; grown extensively about Paris, and a great favorite in that city, whence its name.

Praeparturiens. A dwarf-growing, early-bearing variety; nut small, thin shelled and of fair quality; bears very heavily; good for home garden.

St. John (Serotina). Heavy and regular bearer of medium-sized nuts; leaves and flowers develop after danger from frost has passed.

Vourey. Nut of medium size and fair quality; shell strongly ribbed and pointed.

Zante. A new variety introduced by U. S. Department of Agriculture. Nuts are very large, greatly elongated and pointed at both ends. Kernels are proportionately large, solid and of good flavor. Not fully tested as yet, but seems promising.



GRUB PLOW WITH TEN HORSES, FOLLOWING TREE DIGGER

CITRUS TREES

ORANGES

Mediterranean Sweet. Thornless, low-spreading tree; very productive; fruit oval, medium to large; skin thin; pulp rich color, juicy, melting, sub-acid and vinous. Ripens late.

Ruby Blood. Medium to large, nearly round; skin thin; pulp melting, rich, juicy and of exqulsite flavor, quality unsurpassed; as the fruit ripens, it usually becomes streaked or mottled with blood red; often the entire pulp gets ruby red. A valuable variety.

Tangerine. Fruit flat; small to medium; skin separates freely from the flesh; juicy, aromatic and rich; color deep red; belongs to the Mandarin family. Ripens from December to February.

Thompson's Improved Washington Navel. Medium size, smooth and thin skinned; flavor good; comes into bearing early. We do not consider it superior to Washington Navel.

Valencia Late. A very vigorous grower and makes a handsome tree; early in bearing and very prolific; fruit of medium size, oval, solid, heavy; skin thin, light color; flesh deep rich color; grain fine, firm and crisp; abundant juice; ripens late. May and June.

Washington Navel. This is the most valuable orange; tree of moderate growth, with small thorns; fruit large; skin smooth and thick, of full orange color; fruit seedless; flesh crisp and sweet, with a flavor of its own; it is an excellent shipper.

LEMONS

Eureka. Tree nearly thornless, of rapid growth and prolific bearer; fruit medium size, sweet rind; a good keeper; few seeds; very popular, especially in coast regions. Lisbon. Tree

Lisbon. Tree of largest growth; thorny; fruit medium size, oblong, fine-grained; rind of medium thickness; strong acid; few seeds; a good keeper; popular at interior points especially.

Villa Franca. A strong-growing variety; thorn-less, or nearly so; fruit oblong, juicy and nearly seedless; withstands lower temperature than any other variety.

POMELOS

Marsh Seedless. One of the most popular varieties; nearly seedless; large, roundish; skin smooth, lemon yellow; very juicy and of excellent quality. Triumph. Medium size; flat, round, thin-skinned, full of juice, sweetish, with a distinct but agreeable bitter descent

bitter flavor.

LIMES

Bearss Seedless. Twice as large as the ordinary Mexican lime and seedless; very juicy and decidedly acid. Hardier than Mexican, wonderfully productive and is practically a continuous bearer. Very

Mexican. Tree small, mostly grown in bush form; fruit small; skin smooth, very thin, light yellow; juice rich and abundant, acid and very pleasant; should only be planted in frostless localities or sheltered place.

PERSIMMONS

American. The well-known variety, native of the Eastern States; leaves large, smooth and glossy; fruit reddish yellow, small, about the size of a crabapple.

Italian. A fine tree of medium growth; fruit small but very delicious.

Japanese Varieties. Names of Japanese varieties are so badly mixed that it is idle to give descriptions. Trees imported from Japan under same name will not be the same one year after another. We will list what we have to offer in our annual price list, but cannot guarantee varieties, as there seems to be no reliable standard of nomenclature either here or abroad.

POMEGRANATES

Dessia. A Spanish variety held in high esteem. Pulp has a remarkably rich, high flavor.

La Hative. A fine variety of medium size, ripening early. Good bearer.

Paper Shell. A recent introduction of extraordinarily high quality. The skin is very thin, hence the name; the inside covering of the pulp also very thin; tree a heavy bearer, but more dwarf than the following. For home consumption this variety is following. For highly valuable.

Spanish Ruby. A new and grand sort; fruit large; skin thick, pale yellow with a crimson cheek; flesh of the most magnificent crimson color, highly aromatic and very sweet; a fine grower, good bearer and excellent shipper.

Sweet-Fruited.

Sweet-Fruited. Fruit very large, with sweet and juicy pulp. Ripens early.

LOQUATS

GRAFTED VARIETIES

Advance. Worthy of its name, being a decided advance over other sorts; fruit elongated; larger than Giant; proportion of flesh to seeds larger than usual.

Giant. Introduced from Japan; fruit very large, pear-shaped; flesh deep yellow; when fully ripe, it has a sweet, cherry-like flavor.

Herd. From New Zealand. We have recently succeeded in establishing and propagating this variety, which is said to be superior to any other loquat, but have not had time to fruit it, so can say nothing from our own experience. Comes highly recommended.

Large-Fruited. An improved variety; bears when quite young; fruit shaped like a crabapple; flesh white; seeds small; flavor rich, pleasant and

Victor. Introduced by the U. S. Department of Agriculture as a variety of superior excellence. Has not fruited as yet with us.

SEEDLINGS

Common. These are of a more robust growth than the preceding varieties; leaves very large, glossy green. This is largely planted as an ornamental. Flowers during the winter time are very fragrant. The fruit is round and grows in clusters, like small plume. like small plums.

MULBERRIES

Downing's Everbearing. Larg black; juicy, rich and sprightly. ous grower and very productive. Large fruit, purplish ghtly. Tree is a vigor-

Lick's American. A variety originated by the late James Lick, apparently fully equal to Downing's Everbearing; fruit large, black and of good flavor.

New American. An attractive tree of rapid growth, with very large leaves and producing dark-colored fruit of good size and flavor.

colored fruit of good size and flavor.

Persian. This excellent fruit tree should be in every family orchard. Trees of rather slow growth, but bear young and produce the largest and finest fruit of all the mulberries. The fruit is black, large, one to one and a half inches long, with a fine aromatic flavor and abundant sub-acid juice. This tart flavor makes it very different in taste from all other mulberries. It makes better pies than blackberries, as there are no seeds and no core. Mulberries are invaluable for protecting cherries and other fruits, as birds will eat the mulberries in preference. This variety is also invaluable to plant in chicken yards for shade and feed. Commences to ripen in early summer and bears continually until late fall.

OLIVES

Ascolana. Bears early; very large, exceeded only by Sevillano; proportion of pit to fruit smallest of all; one of the best pickling sorts.

Manzanillo. Fruit large and of irregular orange shape; color deep blue-black with many minute white specks. It is a freestone and consequently highly prized for pickling; the oil is of very high grade; the tree is a rapid grower and a very prolific bearer.

Mission. The variety found at all the old missions. Introduced by the Spanish Padres and for many years the only variety cultivated in California. many years the only variety cultivated in California. It is still the most common and found in almost every county in the State. Succeeds well under all circumstances with very little care. Fruit medium to large; jet black; yields fine oil and can also be pickled. Ripens late.

Nevadillo Blanco. Tree of good size, with the branches well set on; its numerous branchlets usu-

ally bend with the weight of the fruit, which is medium sized and ripens early. It is employed for oil only, yielding an abundant supply of the finest grade.

Rubra. A remarkable variety; vigorous, upright grower; heavy, regular bearer; fruit of medium size, giving an oil of the highest quality; sometimes used for pickles. Tree succeeds well in dry, hilly situations, almost unfit for the growth of any other tree; begins to bear when quite young.

Sevillano (True Spanish Queen). The tree is a strong grower, with spreading branches; leaves large and long. The olives are picked green, pickled and exported from Spain under the name of the "Queen Olive." It is the largest olive known; the shape and form of an English Walnut.

Miscellaneous Varieties. In addition to above, we have stock trees of a great many other sorts, some very fine, but little known. Our collection is doubtless the most complete in America.

GRAPES

FOREIGN RAISIN, TABLE AND SHIPPING VARIETIES

Black Hamburg. A fine, tender grape, producing large, magnificent, compact bunches; berries black, very large and oblong. A great favorite every-

Black Malvoisie. Bunches large and long; berries oval; flavor fine; an excellent table grape and valuable for wine.

Bowood Muscat. Much like the Muscat of Alexandria, having all its good qualities, but shorter jointed and sets fruit more freely.

Chasselas de Fontainebleau (White Sweetwater). Bunches large and compact, berries medium size, round; skin thin, transparent, greenish yellow; pulp tender, juicy, sweet and richly flavored; one of the best configurers were seen as the set of pulp tender, juicy, swee of the best early grapes.

Chasselas Rose. Fruit resembling the foregoing except in color, and that the bunch and berry are smaller and the flavor more pronounced.

Cornichon. Berries very large, oblong; dark blue, almost black, covered with a beautiful bloom; skin rather thick; a good shipping grape.

Emperor. Clusters large; berries large, oval, rose-colored; one of the most valuable grapes for shipping long distances. Does not ripen well near the coast. Very late.

Flame Tokay. Bunches very large and hand-somely formed; berries large; skin thick, pale red or flame colored; flesh firm, sweet, with a sprightly flavor; a splendid shipping grape. Ripens late. The leading show grape of the State.

Golden Chasselas. A most excellent grape; bunches large; berries round and larger than those of the Chasselas de Fontainebleau; skin thin, am-ber color when fully ripe; flesh tender, delicious.

Goodale. Early grape introduced from Germany; as early as Sweetwater, but larger and with the true Muscat flavor, making a combination of the greatest value. Bears heavily.

Gros Colman. Bunches large, thick shouldered;

berries very large, round; skin tough, dark purple or black; flesh coarse, but juicy and sweet.

Lady Downs. Berries large, oval, almost black; flesh firm, sweet and rich flavored; one of our best late grapes.

Ladyfinger. Bunches large and long; berries long, white and thin-skinned; flesh tender, crisp and sweet.

Malaga. Vine a strong grower and immensely productive; bunches very large, loose, shouldered; berry very large, oval, yellowish green; skin thick, fleshy.

Mission (California). The well-known variety cultivated at the missions by the Spanish Padres; strong, sturdy grower, bearing large, black berries; valuable for wine.

Muscat of Alexandria, Bunches large, long and

loose; berries large, slightly oval, pale amber when ripe, covered with a thin white bloom; flesh firm, brittle, exceedingly sweet and rich; fine flavored; the variety most extensively planted for raisins.

Muscat Hamburg (Black Muscat). Bunches large; berries large, roundish, inclining to oval; skin thin, tough, dark reddish purple, covered with a thin blue bloom; pulp juicy, rich and sugary; strongly resembles the Muscat in flavor.

Rose of Peru (Black Prince). Bunches very large; berries large, oval; skin thick, brownish black; flesh tender, juicy, rich and sprightly; a fine market variety.

Royal Muscadine. Berries round; greenish yellow; flesh juicy, sweet and excellent, with the aroma peculiar to this class fully developed.

Sultana. Bunches compact, tapering; berries rather small; skin thin, green, semi-transparent, becoming pale yellow as it ripens; pulp tender,

Sultanina Rosea. Bunches compact, shouldered and very large. (Single bunches frequently weigh four pounds each.) Berries much larger than Thompson's Seedless; color same as Flame Tokay; quality as good; perfectly seedless. Ripens at Niles latter part of September.

Thompson's Seedless. Resembles Sultana in some respects, but in others is much superior. Bunches large and long; berries yellow, seedless. Very heavy bearer in favorable sections.

Tokai Angevin. Bunches medium size, loose: berries slightly elongated, pale red, ripen well and have a fine flavor.

Verdel. Bunches large, conical and loose; berries greenish white, covered with a thick bloom; flesh tender, sugary and richly flavored; ripens late and is very productive.

White Tokay. Large, oval, tender, juicy and rich. Vigorous grower.

Zante. Bunches large, compact; berries round, very small, seedless; skin thin, black, covered with a blue bloom; sweet, juicy and richly flavored. It is from this variety that the dried currants of commerce are made.

FOREIGN WINE VARIETIES

Alicante Bouschet. Bunches and berries medium size; skin black; juice red; good bearer and yields a superior wine.

Aramon. Rather large for a wine grape; deep bluish-black; skin thin; a favorite wine variety in Scutherr France.

Southern France.

Burger. A German variety; bears immense crops and produces an excellent light white wine.

Crops and produces an excenent light white which Succeeds well on light soil.

Carignan. Bunches similar to Mataro; berries oblong, black; produces heavy crops and a highly colored, good wine.

Charbono. Bunches large, long; berries round,

Charbono. Bunches large, long; berries round, black; a heavy bearer.

Feher Zagos. Vigorous, hardy and productive; bunches large and compact; berries oval, yellowish green; flavor very fine; valuable sherry grape.

Franken Riesling. The most popular white wine grape; bunches medium, very compact; berry round, yellowish green; very sweet and spicy.

GRAPES. Foreign Wine Varieties-Continued

Grenache. A strong-growing variety; bunches conical, rather loose; berries bluish black; makes excellent wine, but requires age.

Mataro. Bunches good size; berries round, black; produces dark-colored wine, which improves with age; a valuable wine grape. The leading red wine variety of Southern France.

Petite Syrah. One of the best claret grapes; very vigorous grower and remarkably productive. Cluster loose, long and shouldered; berries of medium size, black, covered with bloom.

Sauvignon Vert (Colombar, Pedro Ximenes). Berries of medium size, greenish white; vine vigorous and very productive. Especially valued for regular bearing.

Zinfandel. Bunches large, compact; berries round, dark purple, covered with a heavy bloom; succeeds well in most any climate. Probably the best all-around claret variety for California.

AMERICAN VARIETIES OR "SLIPSKINS"

Bunch large, rather compact; berries

Barry. Bunch large, rather compact; berries medium, round, black; flesh tender; sweet, pleasant flavor; vine vigorous, very productive and early. Campbell's Early. Strong grower, with large, healthy foliage; productive; its keeping and shipping qualities are equaled by no other early American variety. Ripens with Moore's Early, but will keep in perfect condition long after that variety is gone. Bunch and berry large, glossy black with blue bloom sweet and injury. Seeds few and small blue bloom, sweet and juicy. Seeds few and small.

Catawba. Bunches medium size; berries large, coppery color, covered with a thin, lilac bloom; jucy, sweet and musky. Celebrated in the East for its fine wine.

Concord. Bunches compact, rather large; berries

large, globular, almost black, covered with a fine bloom; juicy, sweet and pleasant.

Delaware. One of the best flavored American grapes; bunches medium, compact; berries small, round, beautiful light red; pulp sweet and tender; juice abundant, rich and vinous.

Duchess. Bunches medium to large, long, compact; berries medium, roundish, greenish yellow when ripe; flesh tender, free from pulp, juicy, sweet, rich, ranking among the best; vigorous and productive.

Isabella. A strong-growing variety, specially adapted for arbors; bunches good size, somewhat loose; berries quite large, oval, black, covered with a blue bloom; juicy, sweet and rich, with a slightly musky aroma

Bunches large; berries medium to large; pale red; flavor rich, sweet, vinous; quality best.

Jefferson. Bunch medium, shouldered, compact; berries medium to large; skin thin, light red, covered with bloom; flesh meaty, tender, sprightly, rich, of fine quality; vine vigorous, healthy.

Moore's Early. A most valuable early grape, combining hardiness, size, beauty, quality, productiveness and earliness among its desirable qualities; bunch large; berry large, round, black.

Niagara. Bunch large, uniform, very compact; berry large, mostly round, light greenish white, slightly ambered in the sun; peculiar flavor and aroma; enormously productive.

aroma; enormously productive.

Pierce (Isabella Regia). A sport from Isabella. The foliage is remarkably large; the vine an exceedingly strong grower and prolific bearer. The berries, like the leaves, are of extraordinary size, twice as large as those of its parent, black with light bloom, and when ripe are exceedingly sweet and delicious, and slightly aromatic. The pulp readily dissolves. We have had it in cultivation under every condition, and it has remained constant, showing no indication of running back to the parent. With us the best black American variety. variety.

Worden. In brief, an improved Concord, being larger in both bunch and berry; handsomer, nearly two weeks earlier and of better quality.

Wyoming Red. An early, light red grape, always yielding enormous crops. It ripens with Delaware, which it resembles in appearance, though larger in bunch and berry; a valuable grape. Very hardy.

CURRANTS

Black Naples. A beautiful fruit, the finest and largest of all Black Currants; highly esteemed for

Fruit of the largest size; bunches short, berries large, deep red; a valuable market sort.

Fay's Prolific. This red currant continues to maintain all claims made for it. It is as large as the cherry, more uniform, fruit less acid, fully as productive, and decidedly earlier.

Fertile de Palluau. A vigorous, upright grower; bunches long; berries bright red; moderately juicy; very productive; adapted to the hot interior locali-ties, where other varieties suffer from the sun.

La Versailles. Very large; red; bunches long; of great beauty and excellent quality. Should be in every collection.

Lee's Prolific. Black; one of the newer English arieties. Fruit is large and of the highest quality. varieties. Bush is of medium growth and very productive.

Pomona. A new red currant of good size; very productive; sweet; of excellent quality.

White Grape. Bunches moderately long; berries very large, whitish yellow, sweet and good; the finest of the older white sorts.

White Transparent. Said to be a seedling of "White Grape" and rather resembles it. Very

BERRIES

GOOSEBERRIES

AMERICAN VARIETIES

Champion. A variety introduced here from Oregon, where it originated; fruit large, round; an immense bearer and entirely free from mildew.

Columbus. Large; handsome; greenish yellow; quality excellent. The best of its class.

Downing. An upright, vigorous grower; fruit good sized, roundish oval. whitish green; skin smooth; flesh soft, juicy and very good.

Houghton. A vigorous grower; fruit medium size roundish, inclining to oval; skin smooth, pale red; flesh tender, sweet and good; entirely free from mildew.

Josselyn. Fruit medium to large, oval, red, smooth, flavor good; early; bears freely; grows vigorously and is free from mildew. Josselyn.

ENGLISH VARIETIES

Berkeley. Sufficiently tried to determine its qualities and characteristics; it is immensely prolific, large and handsome.

Chautauqua. Vigorous; fruit large, oblong, smooth, pale green, of very best quality. Unexcelled for home use.

Very large, oblong; skin thin, hairy,

Crown Bob. Very large, oblong; skin thin, hairy, red; of good flavor, and a first-rate variety.

Industry. Large, oval, dark red, hairy; rich and agreeable; beautiful, and of excellent quality.

Whitesmith. Large, roundish, oval, yellowish white, slightly downy; flavor excellent; bush erect and a good bearer.

BLACKBERRIES

Crandall's Early. Large, firm and very good flavor; it ripens fully two weeks before any other sort, and continues to bear through the whole blackberry season.

Evergreen. Introduced here from Oregon; origin unknown; beautiful, cut-leaved foliage, which it retains during the winter; berries large, black, sweet, rich and delicious; it continues to ripen from July to November, which makes it one of the best berries for family use; an excellent trellis and arbor plant.

and arbor plant.

Himalaya. Wonderfully vigorous grower, making canes up to forty feet in length, consequently must be grown on a trellis or along a fence. Fruit of fairly good size, almost round, juicy and with small seeds. Bears during summer and until late in the fall. Extremely prolific and of great value.

Kittatinny. Fruit large, roundish, conical, rich, glossy black; firm, juicy, sweet and excellent; the variety almost exclusively planted in this vicinity

Lawton. Fruit large, ripens late, very productive. Lawton. Fruit large, ripens late, very productive. Mammoth. This new variety was raised by Judge Logan, of Santa Cruz, and is thought to be a cross between the California Wild Blackberry and the Crandall's Early. It is a very rampant grower, trailing on the ground. Foliage is large, thick and of a deep green color. Fruit of the largest size and ripens early. In size and flavor it is said to surpass all other varieties of blackberries.

DEWBERRY

Lucretia. A trailing variety of the blackberry, producing an abundance of large, glossy black, handsome fruit, of excellent quality; the fruit ripens early and the plant does not sucker.

PHENOMENAL BERRY

Originated by Luther Burbank; a cross between Dewberry and Red Raspberry. Very similar to Loganberry. Mr. Burbank describes it as exceeding all previous berries in size; bright color, and of great productiveness. A decided acquisition to our list of small fruits.

LOGANBERRY

Vine an exceedingly strong grower; trails upon the ground like a dewberry, but should be grown on a trellis; fruit is often an inch and a quarter long, dark red, with the shape of a blackberry, the color of a raspberry and the flavor a combination of both; a splendid shipper. Now widely known and deservedly popular.

STRAWBERRIES

As varieties do not seem to retain their popularity for very long, we change our assortment

steadily, and consequently do not list varieties here. Differences are slight, anyway, and hard to describe. Our annual price list will show what we have to offer each year.

RASPBERRIES

BLACK VARIETIES

Gregg. The largest of the Black-Cap varieties; fruit firm, black, productive, and of fine quality.

Hilborn. Large; sweet, firm and juicy; vigorous and productive. Mid-season.

Kansas. Strong, vigorous grower; berries size of Gregg; of better color, jet black, firm and of best quality.

Ohio. A great producer; the most profitable black sort; berry almost as large as Gregg, but of finer quality.

Palmer. Medium size: good quality: excellent bearer. Early.

RED VARIETIES

An old favorite; large and handsome; bears transportation well; very productive.

Superlative. A new English variety showing Superlative. A new English variety showing a decided improvement over all other previous sorts, especially in its habit of bearing fruit all summer on the young shoots. Fruit is clear red, conical, very large and of very fine flavor. Sufficiently firm to "stand up" well after being picked. Well deserves its name.

Marlboro. A fine early variety, hardy and productive; flavor excellent.

YELLOW VARIETY

Golden Queen. A seedling or "sport" of the Cuthbert, and in hardiness and vigorous growth of plant resembles that variety; fruit of large size; color beautiful yellow; flavor excellent.

MISCELLANEOUS FRUITS, PLANTS, EDIBLE ROOTS, ETC.

Carob Tree (St. John's Bread). A very hand-some evergreen tree of exceptional value as an ornamental. Produces edible, beanlike fruit in the form of long pods. Does well in dry situations.

form of long pods. Does well in dry situations.

Eleagnus Longipes. A handsome, shapely, silverleaved shrub, with ornamental reddish-brown bark
in the winter. The bright yellow flowers appear in
June on long stalks, but the greatest value of the
shrub is in the fruit, which is produced in the
greatest abundance along the whole length of the
branches; oval in shape, and about one-half inch
long; color deep orange red; very showy and attractive. The fruit is not only very ornamental,
but has a sprightly, sharp, pleasant flavor, and
makes a delicious sauce.

Feijoa (Feijoa sellowiana). A new fruit of the

makes a delicious sauce.

Feijoa (Feijoa sellowiana). A new fruit of the greatest value and totally distinct from anything else. Botanically related to the Guava, but does not greatly resemble it. The shrub is very beautiful, having silvery leaves and white flowers with red stamens; well worth planting for its ornamental value alone. The fruit is about two inches long and nearly as thick; oval in shape. It is very aromatic and of delicious flavor. Ripens during the winter season. Very hardy.

Guava. Evergreen shrub with glossy foliage, often planted in hedges. The fruit of the Strawberry variety is about an inch in diameter, of claret color, with a characteristic strawberry flavor and fragrance.

Jujube (Zizyphus jujuba). A small tree with

and fragrance.

Jujube (Zizyphus jujuba). A small tree with
dark, glossy leaves. Fruit oval, the size of a large
olive. They are eaten fresh and also dried. The
jujubes of confectionery are made of this fruit.

Medlar. Medium-sized tree. Fruit should not
be gathered until October or even later. If laid in
a cold fruit room or on shelves, it softens, turns
brown and develops an agreeable acid flavor. We
offer two varieties

rown and develops an agreeable acid flavor. We fer two varieties.

Large Dutch. Fruit very large and flattened; eye wide open; flavor good, but inferior to Nottingham. On account of its size, it is the variety most extensively cultivated in Europe.

Nottingham. Fruit smaller than the preceding variety, but has a superior flavor, rich and subacid. Tree very prolific.

Opuntia Ficus-Indica (Indian Fig Cactus). An exceedingly hardy and ornamental species of Cac-

tus. It reaches a height of ten feet and is very striking as a scenic plant. The fruits are yellow, and are eaten raw, or used for jellies, etc. Perfectly hardy here. The fruit is sometimes shipped to New York from the West Indies. The plant has but few spines.

has but few spines.

Artichoke (Large Green Globe). This is the "bur" artichoke so esteemed by epicures.

Hops. Climbing vines, valuable for ornament and yielding the hops used by brewers.

Horseradish. The ground roots make the well-known condiment of same name.

Liquorice (Glycyrrhiza glabra). The roots are sold dried and also yield the well-known Liquorice of commerce.

Rue. Ornamental and of medicinal value.

ASPARAGUS

Conover's Colossal. The standard variety; large and productive; almost universally cultivated in this State.

A new variety of Southern origin, and Palmetto. reports indicate that it is equally adapted for all sections. It is earlier, a better yielder, more even and regular in its growth and quality equal to that old favorite, Conover's Colossal.

RHUBARB

Australian Crimson Winter. A new variety especially adapted to California climate. Produces crisp, delicious stalks almost perpetually; they are pale greenish red and turn crimson when cooked. It commences to produce edible stalks months before any other sort.

Lorenzo. A very early market variety, realizing very high prices in the San Francisco markets.

Myatt's Linnaeus (Strawberry). The standard sort; large, thick stems; of excellent flavor and mildly acid.

Niles Giant. Originated in this nursery. Easily excels any other variety in the great size of the stalks, which, owing to rapid growth, are exceedingly crisp and juicy. It cooks up very tender. Yields heavily and is of the greatest value either commercially or for home use. Received first award at Sacramento State Fair.

SUGGESTIONS FOR PLANTING AND PRUNING

ORNAMENTALS

In our climate the best time for planting both evergreen and deciduous trees is after the heavy frosts have subsided and sufficient rain has fallen to wet the ground thoroughly. The proper conditions generally obtain during January, February and March. Palms move best in late spring and early summer. The foregoing applies particularly to plants that have to be dug from the open ground; those grown in pots, and also plants established in boxes, can be planted at any time if they receive proper care and attention.

The holes should always be made much larger than merely enough to contain the ball or roots, and then filled in again, putting the best soil nearest the roots. The burlap must never be removed from balled plants; it soon rots and cannot possibly do any harm. To remove it is to risk breaking the ball, which usually means the loss of the plant. When plant comes boxed, remove only the bottom at first. After it is in the hole and standing just as it is going to remain, the sides can be taken off and the dirt filled in. If the weather is hot, it is a good plan to let the top of evergreens stay tied up for a few days, which greatly reduces evaporation and helps the tree to get established. Keep the tops well sprayed. In planting deciduous trees and shrubs which are shipped with bare roots, be certain that the dirt is packed and rammed just as tightly as possible around the roots: only on the very surface should the soil be loose. Never put manure in among the roots when planting. It can be spread on top of the ground around the plant, where it will act as a mulch. Used in this way, it is an advantage; putting it in around the roots generally kills the plant.

Deciduous trees should be pruned in proportion to the amount of roots lost in transplanting. The natural shape should be preserved as much as possible. Where a clean trunk is wanted, the lower limbs should be shortened in, but not cut off close. Leave part of these branches so that the new growth may shade the trunk. They can be removed gradually as the tree attains growth. In very hot districts the bare part of the trunk should be shaded on the southwest side by placing a board in the proper position or wrapping it with burlap. Whitewashing the trunk accomplishes the same results. The idea of this is

to prevent injury by sunburn, which is usually an invitation to borers to enter the tree.

Most trees should be firmly staked when planted, as this will prevent heavy winds from loosening them and insures a straight growth. This is a very important precaution with both deciduous and evergreen trees and is too often neglected. In fastening the tree to the stake, take pains to do it so the tree will not be chafed or choked by the rope.

Proper planting, while of the very greatest importance, is really only a good start in the right direction. Trees may live if neglected, but they will come very far from attaining perfection. Never let them get dry the first summer. When you water the ground around them, see that it is thoroughly soaked. This is vastly better than giving them a little water continually. The tops will appreciate almost daily spraying during the dryest weather. Keep the ground around your plants and trees thoroughly loose and preferably mulched as well. Good stock properly planted and cared for will more than repay all expenditure of time and money.

FRUIT TREES

We ship to sections of such diversified climatic conditions that specific directions for general use are not advisable. There are, however, practices to be followed in any and all sections which we will outline briefly.

Preparation of the Soil

The ground should be plowed at least twice, and the second plowing should be as deep as can be done, using a subsoil plow. The ground should be well drained so that no stagnant water remains about the roots.

Heeling In

On receipt of the trees, open a ditch in loose soil, unpack the trees, being careful to shake out all packing material, put in the trench side by side and cover the roots with fine earth, being careful that it is well filtered among the roots to keep them moist. Never heel in in bundles.

Planting

The holes should be dug at least eight inches to one foot larger in every direction than required by the roots when spread out in their natural position. The top soil should

be broken down from the edge, and raised to a cone in the center of the hole to set the tree on, and the roots then brought to their natural position. While one man is holding the tree, let the other shovel in the top soil, which should be made quite fine, carefully between the roots until covered, then tramp firmly as the filling up progresses; when nearly all filled in, place two inches of fine, loose soil on the top.

The tree when planted may in light soil stand from two to three inches deeper than it stood in the Nursery, but in heavy clay, or wet ground, it is advisable to have it stand at the same height as it was before transplanting.

Pruning

The tops should be shortened in more or less, depending on size, variety and condition of the trees. In commercial orchards one-year-old trees are cut down from 18 inches to 2 feet above ground, and all side limbs are cut to one or two buds; two-year-old trees with formed tops should be shortened in from 6 inches to 1 foot of main stem.

No summer pruning should be done the first year, strong-growing side limbs on lower part of the tree can be shortened in from 6 inches to 1 foot from stem, so that the leaves left will shade the tree.

Shading

On account of our long, hot, dry summers, it is well to shade the sunny side of the tree to prevent sun-scald. This will keep the borers out, as they never attack a tree except at a point of injury. The shading can be done with a board or shook, or else with a piece of burlap wound loosely about the trunk. Whitewash is also a good protection, as it reflects the heat

After Culture

The success of the newly planted trees depends on the care received the first three months after planting. The ground should be kept clean, loose and cultivated after each rain. Should the ground be dry and the trees not start well, scoop out a basin around each tree, pour in two or three buckets of water, and as soon as dry fill in the soil again, breaking it up fine to hold moisture.

INSECTS AND FUNGUS

We are so often asked how to fight Scale, Insects and Fungus on Fruit Trees that we will give the following list of the principal Insecticides and Fungus preventives, as well as their method of preparation.

Lime, Sulphur and Salt Wash

(For winter use upon Deciduous Trees.)

For San Jose and Brown Apricot scale, and as a preventive of curl leaf on peach trees, the following formula and directions, if properly carried out, will produce an effective remedy:

Unslaked lime	40	lbs.
Sulphur	20	lbs.
Stock salt	15	lbs.
Water, to make	60	gals.

Directions.—Place 10 lbs. of lime and 20 lbs. of sulphur in a boiler with 20 gallons of water, and boil over a brisk fire for not less than one nour and a half, or until the sulphur is thoroughly dissolved. When this takes place, the mixture will be of an amber color. Next place in a cask 30 lbs. of unslaked lime, pouring over it enough hot water to thoroughly slake it; and while it is boiling, add the 15 lbs. of salt. When this is dissolved, add to the lime and sulphur in the boiler, and cook for half an hour longer, when the necessary amount of water to make the 60 gallons should be added.

Rosin Wash for San Jose, Apricot and Black Scale

(For winter use upon Deciduous Trees other than Peach.)

The following are the proportions of material for the winter wash:

Rosin	30	lbs.
Caustic soda (98%)	8	lbs.
Fish-oil	$4\frac{1}{2}$	pints
Water to make	100	gals.

Directions.—Place the rosin, caustic soda and fish-oil in a large boiler, pour over them about 20 gallons of water, and cook thoroughly over a brisk fire for at least three hours; then add hot water, a little occasionally, and stir well, until you have not less than 50 gallons of hot solution. Place this in the Spray tank and add cold water to make the necessary amount. Never add cold water when cooking.

Rosin Wash for Black Scale on Citrus, Olive and Other Evergreen Trees

(Apply in August and Septemb	per.)
Rosin 20	lbs.
Caustic soda (98%) 5	lbs.
Fish-oil 3	pints
Water, to make100	gals.

The directions for preparing this remedy are the same as given for the rosin wash for winter

use upon deciduous trees. In most districts of the State the Black-scale has hatched before the end of August, therefore September is a good time to apply this remedy.

For Red Spider or Yellow Mite on Deciduous Trees

Soon after the trees are in leaf in spring, and while they are damp with dew in the morning, thoroughly dust them with sulphur. Use sulphur bellows, or, if the orchard is extensive, fix up a broadcast seeder on a wagon. With this arrangement an orchard can be treated very thoroughly and with dispatch. Infested orchards should be treated at least three times during the spring and early summer.

For Flat-Headed Borers

(Chrysobothris Femorata.)

Guard the stems of trees from infection, by placing a shake or board on the south and west sides of the trees, which protects them from sunburn; or give a coating of whitewash containing some soap and sulphur. On removing a borer, smear the wound over with grafting wax

For Woolly Aphis

As soon as they make their appearance on apple trees, take a stiff brush moistened in coal oil, which should be put in a shallow dish or milk-pan, pour only enough coal-oil in the receptacle to have it about one-quarter inch deep, sufficient only to moisten the ends of the brush, then brush over the Aphis. To protect the roots from it, place on the ground around the body of the tree, wood-ashes. For a two-year-old tree, one-half a shovelful, larger trees increase proportionately; for a large tree, place a bucketful; the winter rains that fall on the tree will run down same, leach the ashes and kill the Aphis on the roots.

Bordeaux Mixture

(For Curl Leaf, Shothole Fungus and Apple Scab.)

This fungus is familiar to all orchardists, and is especially severe on some varieties of the peach more than on others. In the latest experiments, the following remedy (Professor Pierce's formula) has proved the most effectual:

Copper Sulphate (Bluestone). 5 lbs. Fresh lime 5 lbs. Water 50 gals.

Dissolve the Copper Sulphate (Bluestone) in a barrel containing 10 or 12 gallons of water. Slake the quicklime, and thin to a creamy whitewash. Pour the whitewash very slowly through a wire screen into the copper solution. Stir the mixture thoroughly, and add enough water to make 50 gallons in all. Stir occasionally while applying as a spray to the trees.

In the preparation of the Bordeaux mixture it is necessary that the ingredients should be mixed in a wooden vessel. If an iron vat is used, the copper will go to the iron, and the effect of the spray is largely neutralized. Apply the remedy cold and as soon after it is prepared as possible. Never allow it to stand overnight.

For Codling Moth

1st spray. As soon as possible after blossoms have fallen. Bordeaux mixture (Bluestone 3 lbs., lime 4 lbs., water 50 gallons) with 2½ to 3 lbs. of Arsenate of Lead added to each 50 gallons.

2d spray. First week in June. Arsenate of Lead 2 lbs., water 50 gallons. (No Bordeaux.) 3d spray. About August 1st. Same as 2d.

4th spray. Only required for such varieties as will remain on trees through September. Apply about September 1st. Arsenate of Lead 1½ lbs., water 50 gallons.

If this schedule is thoroughly carried out, the codling-moth will be well controlled and the crop almost entirely free from "worms."

For Canker and Measuring-Worm

Spray the infested trees with 1 lb. of Paris Green to 200 gallons of cold water. To prevent the Paris Green from injuring the leaves, dissolve 6 lbs. of fresh lime in water and add the latter to the solution. Keep the mixture constantly stirred while spraying.

INDEX

Ornamental Department

Common Names are followed by the botanical name of the genus under which they will be found

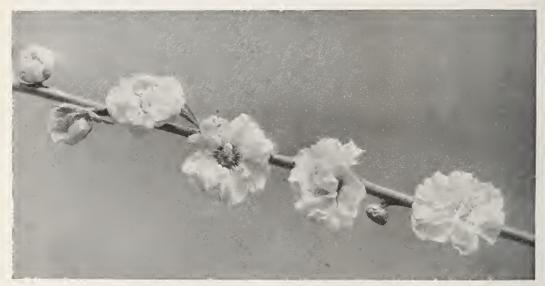
Page

Page	Page	Page
Abelia17	Berry-bearing Trees and	Camellia21
Abelmoschus—Hibiscus83	Shrubs (List)100	Campanula79
Abies 7	Betula41-49	Camphor—Camphora21
Abutilon	Big Tree—Sequoia14	Camphora21
Acacia17	Bignonia61	Canna
Acacia (Albizzia)18-41	Bignonia (Pithecoctenium)66	Carex
Acacia (Leucaena)32	Bignonia (Tecoma)67	Carnation—Dianthus81 Carob—Ceratonia22
Acer	Birch—Betula41 Bird of Paradise Flower—	Carpenteria21
Achania—Malvaviscus	Caesalpinia	Carpinus41
Actinidia61	Bird of Paradise Flower—	Carya—Hicoria43
Adiantum	Strelitzia87	Caryopteris51
Aesculus41	Bitter Nut—Hicoria43	Cascara—Rhamnus38
African Daisy—Gerbera82	Blackthorn—Prunus57	Cassia21
African Lily—Agapanthus77	Blackwood—Acacia18	Cassia-Bark Tree—
Agapanthus77	Bladder Nut—Staphylea59	Cinnamomum23
Agathaea—Felicia82	Bladder Senna—Colutea51	Castanea41
Agathis8	Bladder Senna—Sutherlandia39	Casuarina
Agave	Blanket Flower—Gaillardia82 Bleeding Heart—Dicentra82	Catalpa41
Akebia61	Blue Marguerite—Felicia82	Cavan—Acacia
Albizzia	Blue Palm—Erythea72	Ceanothus22
Alectryon 19	Blue Spirea—Caryopteris51	Cedar—Cedrus9
Almond—Prunus . 45-57	Bonapartea—Agave74	Cedrela41
Althea—Hibiscus 54	Boston Ivy—Ampelopsis61	Cedrus9
Amarvins 77	Bottle Brush—Callistemon21	Celtis41
Amaryms—Hippeastrum83	Bottle Tree—Sterculia39	Century Plant—Agave74
Ampelopsis	Bouvardia51	Cephalotaxus9
Ampelopsis (Evergreen)—	Bougainvillea	Ceratonia22
Cissus62	Bowstring Hemp—Sansevieria 86 Box—Buxus20	Ceratostigma79
Anemone	Box Elder—Acer40	Cercidiphyllum
Angophora19	Boxwood—Buxus20	Cestrum22
Anthurium	Brachychiton—Sterculia39	Chamaecyparis9
Apple—Pyrus	Brazilian Pine—Araucaria8	Chamaerops71
Apricot—Prunus57	Breath of Heaven—Diosma25	Chamaerops—Trachycarpus73
Aquatic Plants . 7c	Bridal Veil—Genista30	Chaste Tree-Vitex39
Aralia (Deciduous)50	Bridal Wreath—Spiraea58	Cherry—Prunus37-45-49
Aralia (Evergreen)—Fatsia29	Brisbane Box—Tristania39	Cherry Laurel—Prunus37
Arbor Vita Whyse	Broad-leaved Evergreens17	Chestnut—Castanea41
Arbor Vitae—Thuya16 Arbutus19	Broom—Cytisus	Chile Jasmine—Mandevilla65 Chilean Cedar—Libocedrus12
Areca—Rhopalostylis	Broom (Spanish)—Spartium39	Chilean Guava—Myrtus34
Arum78	Brugmansia—Datura81	Chimney Rell Flower_
Arundinaria	Brush Cherry—Eugenia29	Campanula79
Arundo70	Buckeye—Aesculus41	Chinese Cork Tree-
Ash—Fraxinus42-49	Buddleia20	Phellodendron44
Asparagus78	Bunya Bunya—Araucaria8	Chinese Parasol Tree—
Aspidistra	Burning Bush—Pyracantha37	Sterculia47
Aucuba	Bush Clover—Lespedeza83	Chinese Rice Paper Tree—
Australian Flame Tree—	Butcher's Broom—Ruseus38 Butterfly Plant—Buddleia20	Fatsia
Sterculia39	Buttonwood—Platanus44	Christmas Berry—Photinia35
Australian Pea Vine—	Buxus20	Christ's Thorn—Paliurus56
Dolichos 63	Caesalpinia51	Chrysanthemum79
Australian Silk Oak—	Calceolaria79	Cinnamomum23
Grevillea	California Bay Tree—	Cinnamon—Cinnamomum23
Australian Tea Tree—	Umbellularia39	Cissus
Leptospermum32 Autumnal Tints, Trees and	California Big Tree—Sequoia14	Cistus
Shrubs Assuming (List)101	California Evergreen Cherry— Prunus37	Clematis
Azalea20-50	California Fan Palm—	Clianthus63
Azara 20	Washingtonia73	Climbing Fig—Ficus63
Baby Moss—Sagina oc	California Laurel—	Climbing Plants61
Baby's Breath—Gyphosphila .82 Bald Cypress—Taxodium47	Umbellularia39	Climbing Snowball—
Bald Cypress—Taxodium47	California Native Trees	Decumaria63
Dain of Gread—Ponillis 41	and Plants100	Clivia80
Bampoo	California Nutmeg—Torreya16	Club Moss—Selaginella76
Bambusa69	California Scarlet	Cneorum
Banana—Musa	Honeysuckle—Pentstemon85	Cockspur—Crataegus
Porhomy: Dankania on F.	California Tree Poppy— Romneya86	Coffee, California Wild—
Basswood—Tilia	California Wild Coffee—	Rhamnus38
Basswood—Tilia	Rhamnus38	Coleus80
Bay Tree (California)	California Wild Holly—	Colutea51
	Photinia35	Conifers7
Beech—Fagus42	California Wild Lilac—	Constantinople Acacia—
BeelWood—Casuarina 99	Ceanothus22	Albizzia41
Bell Flower-Campanula79	Calla—Richardia86	Coprosma
Belladonna Lily—Amaryllis77 Benthamia—Cornus24	Calla (Black)—Arum78 Callistemon21	Coral Berry—Symphoricarpos. 59 Coral Gem—Lotus
Berberis20-51	Calycanthus51	Coral Plant—Erythrina82
31		Joseph Land Tary Hilliam

Page	Page	Page
Corchorus—Kerria55	Farfugium—Senecio87	Indian Currant—
Cordia23	Fatsia29	Symphoricarpos59
Cordyline74	Felicia82	
		Instructions for Planting
Coreopsis80	Ferns and Mosses76	and Pruning120
Corkscrew Flower—Phaseolus 66	Fescue Grass—Festuca82	Iochroma31
Cornus24-52	Festuca82	Ipomea64
Coronilla24	Ficus30-63	Iris83
Cortaderia80	Fig—Ficus30-63	Inon-mond Webmonia 97
	Fig—Ficus	Ironweed—Vernonia87
Corylus52	Fig (Climbing)—Ficus63	Ironwood—Ostrya44
Corynocarpus24	Filbert—Corylus52	Island Ironwood—
Corypha—Livistona72	Fir—Abies7	Lyonothamnus32
Cotoneaster24	Flame Tree—Sterculia39	Islay—Prunus37
Cotyledon80	Flowering Maple—Abutilon77	Ivy—Hedera63
Crab Apple—Pyrus45	Formulas for Insect and	Ivy Geranium—Pelargonium85
Cranberry Bush—Viburnum60	Fungus Remedies121	Jacaranda31
Crape Myrtle-Lagerstroemia55	Forsythia54	Jacobean Lily—Sprekelia87
Crataegus (Deciduous)42-49	Fraxinus42-49	Jacobinia83
Crataegus (Evergreen)—	Fringe—Rhus58	Japan Ivy—Ampelopsis61
Pyracantha37	Fuchsia54-82	Japanese Cedar—Cryptomeria 10
Crinum80	Gaillardia82	Japanese Cedar—Cryptomeria 10 Japanese Elm—Zelkova48
Cross Vine—Bignonia61	Garrya30	Japanese Fan Palm-
Cryptomeria10	Genista30	Trachycarpus73
Cucumber Tree—Magnolia43	Genista—Cytisus25	Japanese Rose—Kerria55
Cunninghamia10	Geranium—Pelargonium85	Japanese Sedge—Carex79
Cupressus11	Gerbera82	Japanese Varnish Tree—
Cumpant Diller		Storoulio 47
Currant—Ribes58	Giant Reed—Arundo70	Sterculia47
Cydonia52	Ginkgo42	Japanese Yew—Cephalotaxus9
Cyperus76	Gleditschia43	Jasmine—Jasminum55-64
Cypress—Cupressus11	Gold Dust Plant—Aucuba19	Jasminum55-64
		Jerusalem Thorn—
Cypress—Chamaecyparis9	Golden Bell—Forsythia54	Dowlingonia 95
Cytisus25-52	Golden Chain—Laburnum43	Parkinsonia35
Dahlia81	Golden Dew Drop—Duranta26	Jessamine—Jasminum64
Dammar Pine—Agathis8	Golden Glow-Rudbeckia86	Jubaea72
Dammara—Agathis8	Golden Rod—Solidago87	Judas Tree—Cercis42
Danhno	Grape—Vitis67	Juglans
Daphne25		Jugians
Daphniphyllum25	Grecian Laurel—Laurus31	Jujube—Zizphyus48
Dasylirion	Grevillea30	Juniper—Juniperus11
Date Palm—Phoenix72	Groups100	Juniperus11
Datura81	Guadalupe Island Palm—	Justicia—Jacobinia83
Deciduous Ornamental		Kangaroo Thorn—Acacia17
Decidious Ornamental	Erythea	
Trees40	Guava—Psidium37	Kennedya (Hardenbergia)63
Deciduous Shrubs50	Gum: Blue, Red, etc.—	Kentia—Howea72
Deciduous Weeping Trees49	Eucalyptus26	Kentucky Coffee Tree—
Decumaria63	Gymnocladus43	Gymnocladus43
Deeringea25	Gynerium—Cortaderia80	Kerria55
Dolphinium	Gynerium—Cortageria	
Delphinium81	Gypsophila82	Kniphofia83
Deodar—Cedrus9	Habrothamnus—Cestrum22	Laburnum43-49
Desmodium—Lespedeza83	Hackberry—Celtis42	Lady Washington Geranium—
Deutzia52	Hakea30	Pelargonium84
Dianthus81	Hardenbergia63	Lagerstroemia55
Dicentra82		Lagunaria31
Dielata Dielat	Hatchet-Leaved Arbor Vitae—	Lagunaria
Dielytra—Dicentra82	Thuyopsis16	Larch—Larix43
Diervilla53	Hawthorn (Deciduous)—	Larix43
Diosma25	Crataegus42-49	Larkspur—Delphinium81
Diospyros42	Hawthorn (Evergreen)-	Laurel (Bay Tree)—Laurus31
Dodonaea26		
Dodonaea	Pyracantha37	Laurel (California)—
Dogwood—Cornus24-52	Heath or Heather—Erica26	Umbellularia39
Dolichos63	Hedera63	Laurel (Cherry Laurel)—
Douglas Spruce—Pseudotsuga.14	Hedge Plants (List)101	Prunus37
Dracaena—Cordyline74		Tourne 21
Drought Posisting T	Heeria—Heterocentron31	Laurus31
Drought Resisting Trees	Heliotrope—Heliotropium82	Laurustinus—Viburnum39
and Shrubs (List)102	Hemerocallis83	Lavender—Lavendula32
Duranta	Hemlock—Tsuga16	Lavendula32
Dwarf Fan Palm—	Hercules' Club—Aralia50	Lawson Cypress—
_ Chamaerops71	Heterocentron 21	Chamaecyparis9
Echoronia Cotal ?	Heterocentron31 Heteromeles—Photinia35	Towar Markons Timis
Echeveria—Cotyledon80	Heteromeles—Photinia35	Lemon Verbena—Lippia56
Echium	Hibbertia64	Leonotis83
Edgeworthia53	Hibiscus54-83	Leopard Plant—Senecio87
Edwardsia—Sophora38	Hickory—Hicoria43	Leptospermum32
Egyptian Lotus—Nelumbo76	Hicoria43	Lespedeza83
Esyptian Lotus—Nelumbo76	micoria40	Lespeueza
Egyptian Paper Plant—	High Bush Cranberry—	Leucaena32
Cyperus	Viburnum60	Leycesteria56
Elaeagnus	Hills of Snow-Hydrangea54	Libocedrus12
Elder—Sambucus58	Hippeastrum83	Ligustrum32
Elm—Ulmus47-49	Holly—Ilex31	Lilac—Syringa59
Empress Trees To1		Lilac, California Wild—
Empress Tree—Paulownia44	Holly-leaved Cherry—Prunus 37	Competent
English Ivy—Hedera63	Honey Locust—Gleditschia43	Ceanothus22
English Laurel—Prunus37	Honeysuckle—Lonicera56-65	Lime Tree—Tilia47
Ephedra63	Hop Hornbeam—Ostrya44	Linden—Tilia47
Erica	Hop Vine—Humulus64	Lion's Tail—Leonotis83
Erythea	Hornbeam—Carpinus41	Lippia
Envitoring	Home Charling41	Tignidember 40
Erythrina82	Horse Chestnut—Aesculus41	Liquidambar43 Liriodendron43
Escallonia26	Howea72	Liriodendron43
Eucalyptus27	Hoya64	Lists for Various Purposes100
Eugenia 90	Humulus64	Livistona72
Eugenia (Myrtus)34	Hydrangea54	Locust—Robinia46
Fulalia Miggarthan		Lonicera56-65
Eulalia—Miscanthus84	Hymenosporum31	
Euonymus	Hypericum31	Lotus83
Exochorda54	Ilex31	Lotus (Egyptian)—Nelumbo76
Fagus	Imantophyllum—Clivia80	Luma—Myrtus34
False Hemlock—Pseudotsuga.14	Incense Cedar—Libocedrus12	Lyonothamnus32
Fon Dolm Wood to the		Madrone—Arbutus19
Fan Palm—Washingtonia73	India Rubber Plant—Ficus30	maurone—Arbutus

Page	Page	Pag
Magnolia32-43-56	Pearl Bush—Exochorda54	Sansevieria8
Magnolia (Michelia)33	Pearlwort—Sagina86	Savin—Juniperus1
Mahonia33	Pelargonium84	Saxifraga8
Maiden Hair Fern-	Penstemon85	Schinus3
Adiantum76	Peony—Paeonia56-84	Scorpion Senna—Coronilla2
Maiden Hair Tree—Ginkgo42	Pepper—Schinus38	Screw Pine—Pandanus8
Adiantum	Persea35	Sea Lavender—Statice3
Muehlenbeckia65	Persimmon—Diospyros42	Sea Urchin—Hakea3
Malvaviscus84	Petunia85	Sedge—Carex
Mandevilla65	Phaseolus	Selaginella
Maple—Acer	Phellodendron	Senecio
Maple (Japanese)—Acer50	Phillyrea35	Service Trce—Sorbus4
Marguerite—Chrysanthemum. 80	Phlox85	Shaded Locations, Shrubs
Marguerite (Blue)—Felicia82 Matilija Poppy—Romneya86	Phoenix72	Suitable for (List)10
Mastich Tree—Pistacia35	Phormium86	Shasta Daisy—
Mattress Vine—	Photinia35	Chrysanthemum8
Muehlenbeckia65	Phyllostachys7t	She Oak—Casuarina2
Maytenus33	Picea12	Shrubs, Deciduous5
Medicago84	Pimelea35	Silk Oak—Grevillea3
Melaleuca33	Pine—Pinus	Sloe—Prunus5
Melia43	Pinus13	Smilax—Asparagus7
Melianthus84	Pistacia35-44	Smoke Tree—Rhus5
Metrosideros—Callistemon21	Pistachio—Pistacia35-44	Snail Vine—Phaseolus6
Mexican Orange—Choisya23	Pithecoctenium66	Snowball—Viburnum6
Michelia33	Pittosporum36	Snowberry—Symphoricarpos5
Millettia65	Plane—Platanus44	Solanum6
Mimosa Tree—Albizzia41	Planting Instructions120	Solidago8
Miscanthus84	Platanus44	Sollya
Miscellaneous Plants77	Plum—Prunus45-57	Sophora38-4
Mock Orange—Philadelphus56	Plumbago	Sorbus47-4
Money Vine—Muchlenbeckia65	Plumbago (Ceratostigma)79	Spanish Bayonet—Yucca7
Monkey Puzzle—Araucaria9	Podocarpus	Spartium3
Montezuma Cypress—	Poinciana—Caesalpinia51	Spiraea
Taxodium	Poker Plant—Kniphofia83	Spiraea
Moon Trefoil—Medicago84	Polygala	Sprekelia8
Moreton Bay Fig—Ficus30	Poplar—Populus44-49	Spruce—Picea1
Morus	Poppy—Romneya86	Spurge Olive—Cneorum2
Moss—Selaginella76	Populus44-49	St. Anthony's Nut—Staphylea.5
Mountain Ash—Sorbus47-49	Port Orford Cedar—	St. John's Bread—Ceratonia2
Muehlenbeckia	Chamaecyparis9	St. John's Wort—Hypericum3
Mulberry—Morus43-49	Potato Vine—Solanum66	St. Patrick's Cabbage—
Musa84	Privet—Ligustrum32	Saxifraga8
Myoporum 33	Prunus37-45-49-57	Standard Roses9
Myrtle—Myrtus34	Pseudotsuga14	Staphylea5
Myrtus34	Psidium37	Star Jasmine—
Nandina34	Pteris76	Trachelospermum6
Native to California100	Pterocarya45	Statice
Nelumbo	Punica57	Sterculia
Nephrolepis	Purple Fringe—Rhus58	Strawberry Tree—Arbutus1
Nerium34	Pygmy Date Palm—Phoenix72	Street Trees (List)10
New Zealand Flax—	Pyracantha37	Strelitzia8
Phormium86	Pyrus45	Streptosolen8
New Zealand Laurel—	Quercus38-46	Sumach—Rhus5
Corynocarpus24	Quince—Cydonia52	Surinam Cherry—Eugenia2
New Zealand Oak—Alectryon.19	Raphiolepis38	Sutherlandia3
Nettle Tree—Celtis41	Red Bud—Cercis42 Red-Hot Poker Plant—	Swainsona8
Nolina	Whiphofo	Sweet Gum—Liquidambar4
Chamacovparia	Kniphofia83 Redwood—Sequoia14	Sweet Olive—Osmanthus3
Chamaecyparis10 Norfolk Island Pine—	Retinispora—Chamaecyparis10	Sweet-Scented Shrub—
Araucaria8	Rhamnus38	Calycanthus5
Nymphaea76	Rhododendron38	Sword Fern—Nephrolepis7
Uak—Linerone of 40	Rhopalostylis72	Sycamore—Platanus4
Olea—Osmanthus35	Rhus58	Symphoricarpos
Olea—Osmanthus 35 Oleander—Nerium 34 Oregon Grand Malandar	Rhynchospermum—	Syringa (Lilac)5
Oregon Grape—Manonia33	Trachelospermum67	Syringa (Mock Orange)—
Oregon Pine—Pseudotsuga 14	Ribes	Philadelphus5
Oreodaphne—Umbellularia39	Richardia86	Syzygium3
Oriental Plane—Platanus44	Robinia46	Tacsonia6
Ornamental Department 7	Rock Rose—Cistus23	Tamarisk—Tamarix6
Osmanthus35	Romneya86	Tamarix6
Ostrya44	Roses	Tasmanian Ivy
Paeonia	Roses (Alphabetical List)98	Muehlenbeckia6
Paliurus	Rose Acacia—Robinia46	Taxodium14-4
Paliurus	Rosemarinus	Taxus
Palms71	Rose of Sharon—Hibiscus54	
Pampas Grass—Cortaderia80	Rowan—Sorbus47	Templetonia3 Texas Umbrella—Melia4
Pandanus	Rubber Plant or Tree—	Thorn (Deciduous)—
Pansy—Viola 87	Ficus30	Crataegus42-4
Papyrus—Cyperus	Rudbeckia86	Thorn (Evergreen)—
Parasol Tree—Sterculia 47	Ruseus38	Pyracantha3
Parkinsonia 25	Russelia86	Thunbergia
Parrot's Bill—Clianthus 63	Sabal72	Thuya1
Passifiora	Sage—Salvia86	Thuyopsis1
Passion Vine—Passiflora65 Passion Vine—Tasconia66	Sagina86	Tilia4
Passion Vine—Tasconia66	Salisburia—Ginkgo42	Tobira—Pittosporum3
Paulownia 44	Salix47-49	Torreya1
Pavonia	Salvia86	Toyon—Photinia3
Peach—Prunus45	Sambucus58	Trachelospermum6

ı uşc	rage	Page
Trachycarpus 73 Tradescantia—Zebrina 87 Transvaal Daisy—Gerbera 82 Tree Peony—Paeonia 56 Tree Poppy—Romneya 86 Tree Roses 97 Tristania 39 Tritoma—Kniphofia 83 Trumpet Vine—Tecoma 67 Tsuga 16 Tulip Tree—Liriodendron 43 Tumion—Torreya 16 Turk's Cap—Malvaviscus 84 Ulmus 47-49 Umbellularia 39 Umbrella Plant—Cyperus 76 Umbrella Tree—Melia 43 Variegated Trees and 87 Vernonia 87 Veronica 39	Viburnum 39-60 Victorian 80 Viola 87 Violet—Viola 87 Virgilia—Cladrastis 42 Virgilia—Cladrastis 42 Virgilia Creeper—Ampelopsis, 61 61 Vitex 39-60 Vitis 67 Walnut—Juglans 43-49 Wandering Jew—Zebrina 87 Washingtonia 73 Water Lily—Nymphaea 76 Water Plants— 8ee Aquatics 76 See Aquatics 76 Wattle—Acacia 17 Wax Plant—Hoya 64 Weeping Trees 49 Western Ironwood— 12 Lyonothamnus 32 Weigela—Diervilla 53 Wigandia 39 Willow—Salix 47-49	Windmill Palm— 73 Trachycarpus 73 Wine Palm—Jubaea 72 Wire Vine—Muehlenbeckia 65 Wistaria (Deciduous) 68 Wistaria (Evergreen)— 65 Millettia 65 Wonga Wonga Vine—Tecoma 61 Xanthoceras 60 Yellow Day Lily— 40 Hemerocallis 83 Yellow Heliotrope— 87 Streptosolen 87 Yellow Horn—Xanthoceras 60 Yellow Wood—Cladrastis 42 Yew—Taxus 15 Yew (Cephalotaxus) 9 Yucca 75 Zebrina 87 Zelkova 48 Zizyphus 48
_	· · · · · · · · · · · · · · · · · · ·	
Page	Page	Page
Almond 114 Apple 103 Appricot 111 Artichoke 119 Asparagus 119 Berries 118 Blackberry 118 Caprifig 113 Carob Tree 119 Cherry 106 Chestnut 114 Citrus Trees 116 Crab Apple 104 Currant 118 Dewberry 119 Eleagnus 119 Feijoa 119 Fig 112 Filbert 114	Formulas for Insect and Fungus Remedies	Nut Trees 114 Olive 117 Opuntia 119 Orange 116 Peach 110 Peach 115 Pecan 114 Persimmon 116 Phenomenal Berry 119 Plum 107 Pomegranate 116 Prune 109 Quince 112 Raspberry 119 Rue 119 Strawberry 119 Walnut 114



 $\begin{array}{cccc} Prunus \ amygdalus \ \textit{fl. pl.} & \text{Double-Flowering Almond} \\ & \text{See} & \text{Page} & 45 \end{array}$

INDEX OF ILLUSTRATIONS

Ornamental Department

All cuts are indexed under both botanical and common names

Pa	ige	Page
Abies nordmanniana	8	Eucalyptus globulus compacta 27
Abies pinsapo	16	Eucalyptus leucoxylon
Acacia baileyana	17	Exhibit of Conifers at P. P. I. E.—Back Cover
Acacia cultriformis	18	Exachanda grandidara
Agagia degurrong		Exochorda grandiflora
Acacia decurrens	18	Fatsia japonica
Acacia longifolia (A. latifolia)	19	Fern, Philadelphia Lace 76
Acacia melanoxylon (Black)	19	Fern, Venus-Hair 77
Acer saccharinum	40	Fir, Nordmann's Silver 8
Adiantum capillus-veneris imbricatum	77	Fir, Spanish 16
African Lily	78	Forgythia gugnonga
Agapanthus umbellatus	78	Forsythia suspensa 53
Agave americana—Front Cover	• •	Gerbera jamesoni hybrida 83
Almond, Double-Flowering	45	Golden Bell 53
Almond, Double-Plowering		Hakea suaveolens 28
Almond, Dwarf Double-Flowering	55	Hawthorn, Evergreen
Ampelopsis tricuspidata (A. veitchi)	34	
Anemone japonica, Queen Charlotte	78	Hills of Snow 53
Apple, Kaido	49	Holly, English 31
Araucaria excelsa	10	Hydrangea arborescens sterilis 53
Araucaria excelsa glauca	9	Hydrangea hortensis 54
Araucaria imbricata	7	Hydrangea hortensis variegata 54
Australian Tea Tree	32	Hypericum moserianum 30
	32	Ilex aquifolium 31
Balled Trees	14	Island Transport
Bamboo	69	Island Ironwood 33
Banana	85	Japanese Fan Palm 14
Barberry, Darwin's	20	Japanese Tea Garden 29
Berberis darwini	20	Jasmine, Catalonian 63
Detule alba		Jasmine, Double Yellow 64
Betula alba	41	Jasminum grandiflorum
Big Tree	14	
Bignonia tweediana	61	Jasminum primulinum 64
Bignonia venusta	62	Juniper, Irish 12
Birch, European	41	Juniperus communis hibernica 12
Boston Ivy	34	Laburnum vulgare 42
Bottle Brush	21	Leptospermum laevigatum 32
Boxing Trees		Liquidambar styraciflua
	16	
Boxwood, Standards	20	
Bridal Wreath	59	Lotus bertholeti 84
Broom, Portugal	25	Lyonothamnus floribundus asplenifolius 33
Broom, Spanish	37	Magnolia soulangeana 55
Buxus sempervirens	20	Magnolia, Chinese 55
		Magnolia stellata 56
California Big Tree	14	Maiden Hair Vine. 64
California Fan Palm	73	
California Tree Poppy	86	Maple, Silver 40
Callistemon	21	Marguerite, Common White 79
Camellia japonica	$\frac{22}{22}$	Marguerite, Double White 3
Carpenteria californica	22	Matilija Poppy 86
Cedrus deodara	10	Monkey Puzzle 7
Century Plant—Front Cover	10	Muehlenbeckia complexa 64
	23	Musa 85
Cestrum aurantiacum		Myrtle, Variegated
Cherry, California Evergreen	35	
Cherry, Japanese Flowering	46	Myrtus communis variegata
Cherry, Japanese Weeping	50	Nephrolepis amerpohli 76
Chrysanthemum frutescens	-79	Norfolk Island Pine 10
Chrysanthemum frutescens, Mrs. F. Sander	3	Passiflora
Clematis, Large-Flowering	63	Passion Vine
Clematis montana	62	Peach, Double White-Flowering
Cocos australis	71	
	1 1	Pearl Bush 51
Conifers Exhibited at P. P. I. E.—Back Cover	0.4	Phoenix canariensis
Coral Gem	84	Phoenix humilis loureiri 65
Coral Plant	82	Phyllostachys quilioi 69
Cordyline australis	74	Picea pungens glauca 13
Cornus capitata	24	Picea sitchensis (P. menziesi)
Coronilla glauca	23	Pimelea ferruginea (P. decussata) 34
Cupressus sempervirens fastigiata	11	
Currant, Red-Flowering	58	
Current Valley Florening		Platanus orientalis 44
Currant, Yellow-Flowering	57	Plum, Double-Flowering 58
Cypress, Italian	11	Plumbago capensis 65
Cytisus albus	25	Poppy, Matilija 86
Dahlia, Le Grand Manitou	80	
To all the TTT and	-	70 131 10 11
Daniia, Wodan	81	
Dasylirion quadrangulatum	75	
Date Palm	72	
Deodar	10	Prunus persica 47
Diervilla florida	51	
Dogwood, Evergreen	24	
Dracaena	74	Prunus triloba 58
		70
Edgeworthia gardneri (E. papyrifera)	52	75-1-17-
Elm Huntingdon	48	
Erythrina crista-galli	82	
Escallonia montevidensis	26	Ribes sanguineum 58
Escallonia rubra	26	Robinia pseudacacia decaisneana 46

Page	Page
Romneya coulteri 86	Taxus baccata fastigiata 15
Roses—	Tecoma australis
Banksia Double Yellow 97	Tecoma grandiflora 66
Fortune's Yellow	Tecoma jasminoides 67
Frau Karl Druschki	Trachelospermum jasminoides
Mad. Caroline Testout 88	Trachycarpus excelsus
Mlle. Cecile Brunner 95	Transvaal Daisy
Mrs. David Jardine	Trumpet Vine, Chinese
Paul Neyron 93	Ulmus scabra huntingdoni:
Standard or Tree	Veronica speciosa imperialis
Rhynchospermum jasminoides	Washingtonia filifera robusta
Sequoia gigantea	Weeping Big Tree
	Weigela rosea
	Wistaria, Chinese
	Wistaria, Japanese
	Wistaria muttijuga
Star Jasmine 68	
Sycamore, European 44	
Tamarix parviflora (T. africana) 60	Yew, Irish 15
	·
~~	
- Fruit	Department
Page	Page
Apple Trees 103	
Apricot Trees	Pear Trees 105
Cherry Trees 106	Prune Trees 109
Grub Plow 115	Tree Digging 113

Up to time this catalog goes to press

WE HAVE BEEN AWARDED

BY THE

Panama-Pacific International Exposition

SAN FRANCISCO, 1915

GRAND PRIZE-

For Educational Exhibit of Fruits

MEDAL OF HONOR-

For Exhibit of Coniferous Evergreens

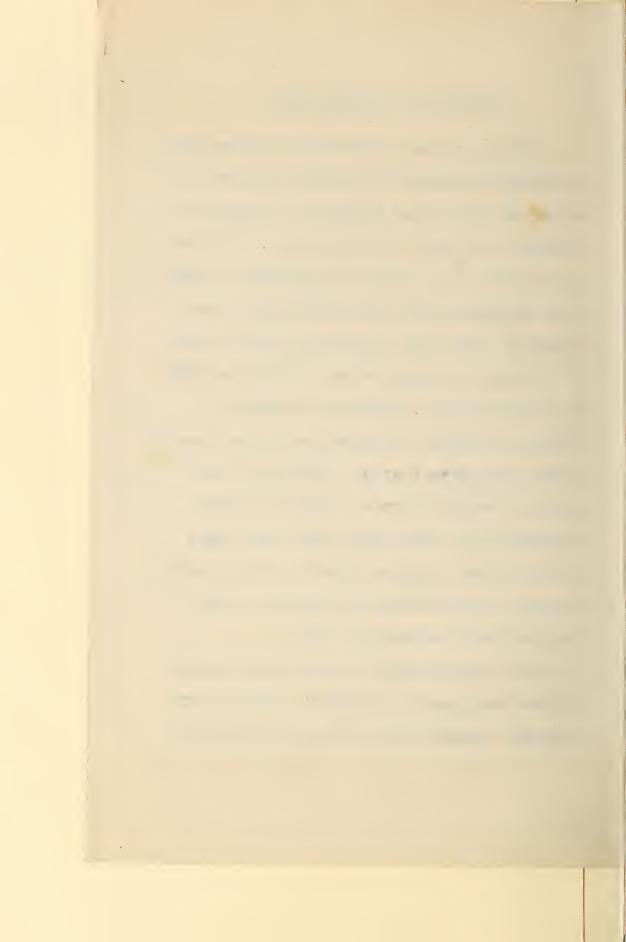
GOLD MEDAL-

For Exhibit of Berry-bearing and Autumntinted Shrubs and Trees

FLOWERS OF THE WEST WIND

"Flowers of the West Wind" may seem like a fanciful expression purposely applied to catch the eye in the heading of a magazine article, but such is not the case. On the contrary it is a literal translation of the name Zephyranthes, derived from the Greek, zephyros. West wind and anthos flower given to a genus of lovely bulbous plants in 1821 by Dean William H. Herbert, an early English authority on these and related plants of the amarvllis family. Although it was applied because bulbs of certain species came from the West Indies, the name might well have been applied because of the dainty beauty of their flowers produced as they are on slender wand-like stems.

It is interesting to note that probably without knowledge of Herbert's name or its meaning, common names indicating something



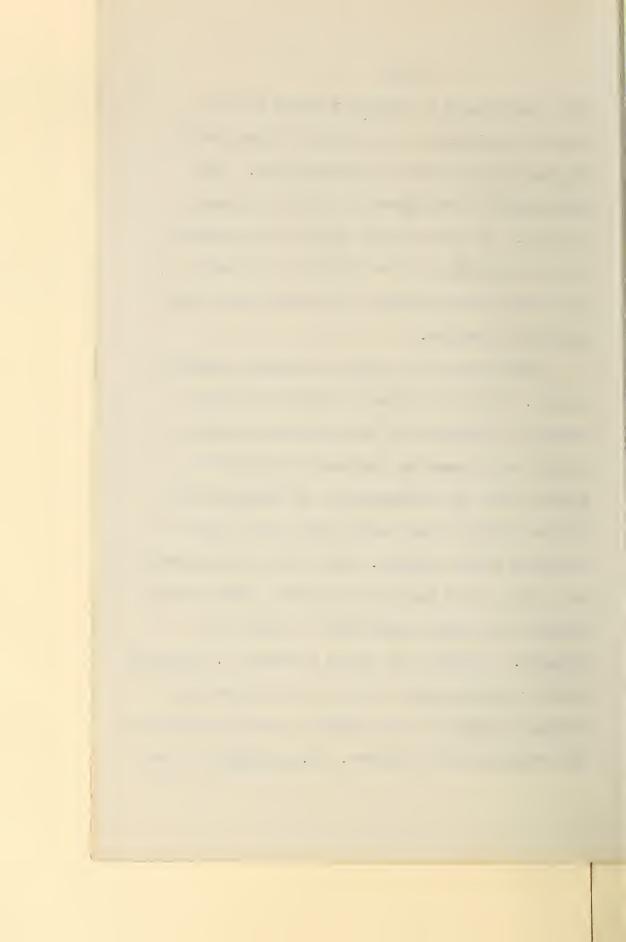
unusually attractive about them or something exceptional in their behavior, have been applied as common garden names. They are known here and there throughout that area where they are grown in gardens, some of them planted long ago, as "fairy-lilies" or "rain-lilies" while closely related species are known as "prairie-lilies".

The names fairy and rain lilies were given because flowers are produced suddenly in quantities following rains. For some time perchance the weather has been dry. Rains fall on green foliage only, then the spear points of buds shove up through the earth and in a day or two the flowers open in all the glory of a sudden burst and where but a few hours before there was nothing but green leafage there is now a fairy strewn stretch of wondrous beauty. So quickly do they come that where today they are in full bloom, no signs of flowers were in evidence two or three



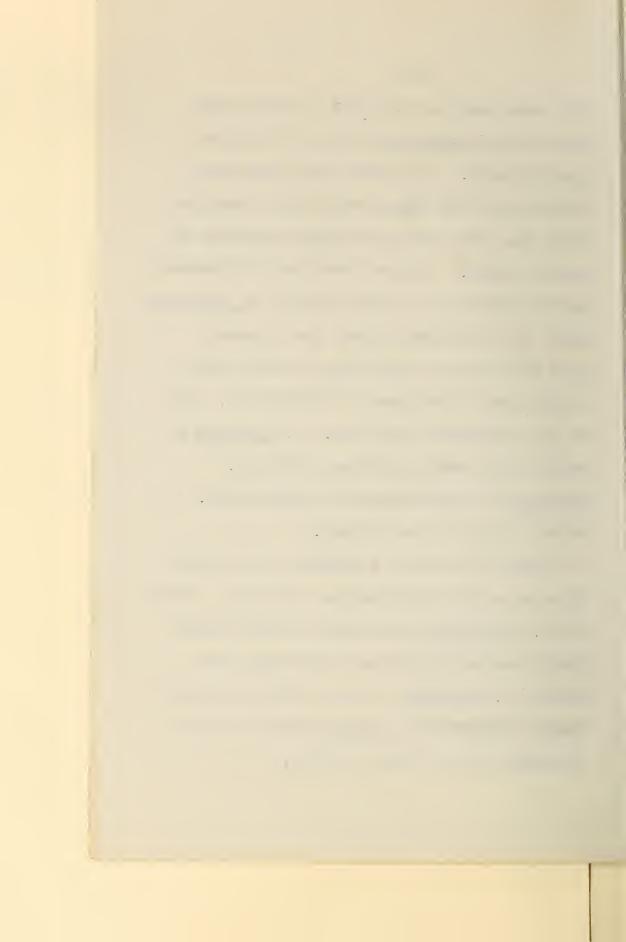
days before and a closely planted bed or border has become in so short a time a mass of pure white or soft or vivid pink. The same speed is evidenced in the development of seed. In three weeks time or thereabouts from the opening of the flowers the seeds are matured and dropping from bursting three cornered capsules.

Zephyranthes are almost entirely American plants. Some are found native in the flat woods and prairies of the southern states, others belong to the highlands of the West Indies, and to the mountains of Mexico, while others brighten the pampas and other parts of Southern South America. The colors represented are white, pink in several shades, yellow and copper, all have grass-like or rush-like foliage. Florida has three species, Z. atamasco in the western part of the state whence it extends northward into Virginia and Pennsylvania and westward into Alabama. Z. treatiae in the

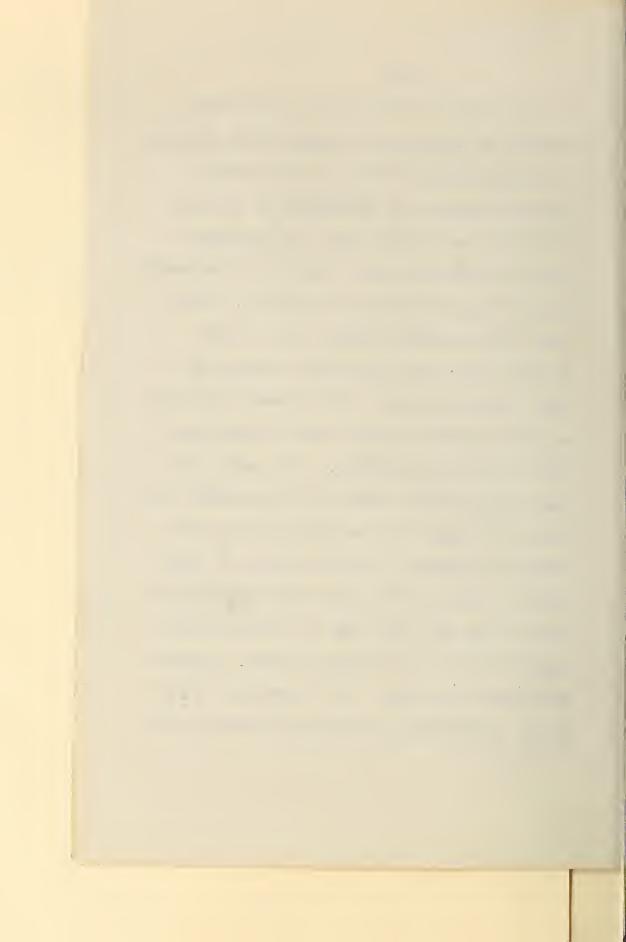


flat wood areas of the eastern part of the State and Z. simpsonii found far south on similar lands. The latter has crocus-like flowers that are cupped when fully developed while the other two have widely expanded recurved petals. All are lovely white flowered species blooming in early spring. Z. atamasco or as it is commonly known, the Atamasco Lily (it is not a true lily) is the native species most often seen in cultivation. It is the hardiest of the three. Z. treatiae is occasionally seen in gardens, while Z. simpsonii is probably not in cultivation. At any rate it is not common.

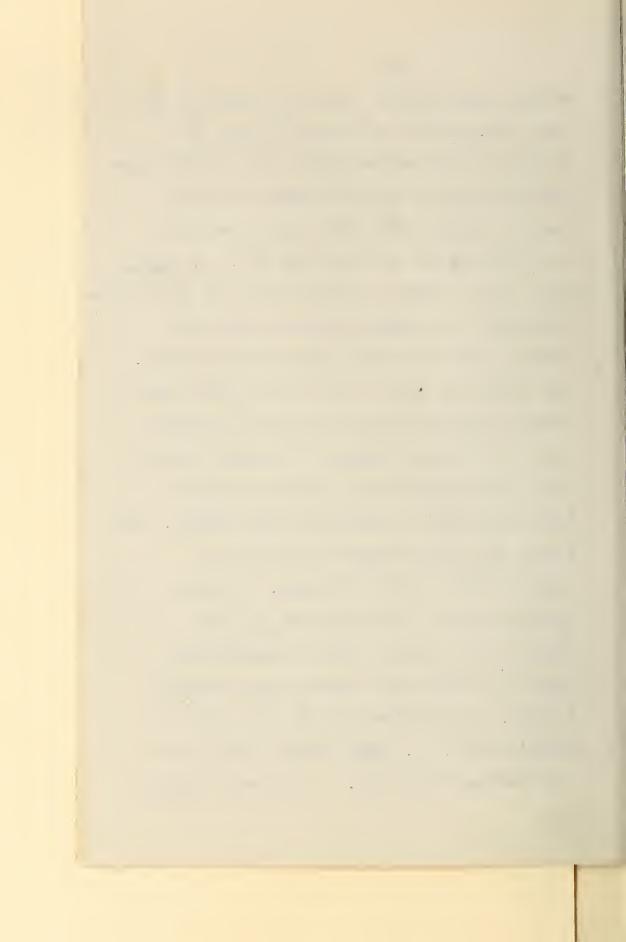
West of the Gulf of Mexico, three yellow flowered native Zephyranthes are found. These are Z. longifolia with yellow flowers found from Texas to Arizona and southward into Mexico, Z. pulchella light yellow found near Corpus Christi and Z. texana copper yellow occurring on the Texas prairies.



In southern gardens, three introduced species, Z. carinata, Z. rosea and Z. candida are fairly common, while a fourth white flowered species. Z. tubispatha of foreign origin is occasionally met. Z. carinata. native in Jamaica, Cuba, Mexico and Guatemala, is the largest flowered of them all. Well grown bulbs produce flowers that measure slightly more than four inches across the fully expanded petals. Its flowers are borne on stout somewhat ridged stems (scapes) and nod or bend over slightly. The leaves and scapes are reddish purple at their bases, the bulbs are large (for the group) and do not multiply rapidly. In the latitude of North Florida they come into full bloom the latter part of May and from then on throughout the summer there is a scattering bloom. Farther North they are later. The leaves are quite hardy, withstanding temperatures down to 220

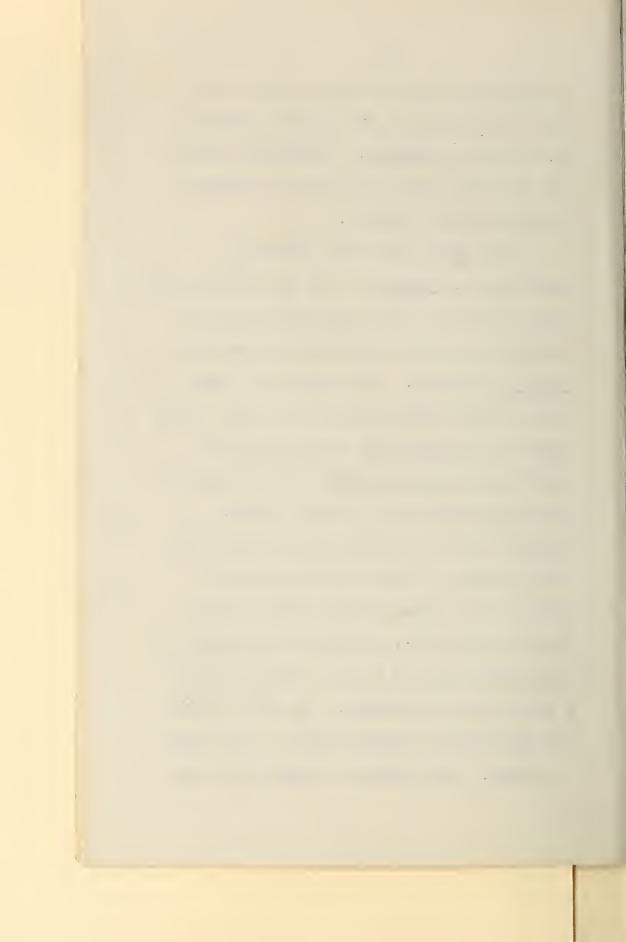


without being killed. They are keeled on the back, channeled on the front and grow to a length of about twelve inches. The flowers open fairly dark mink, whitish toward the base. become a lighter shade when fully open, and are lighter still as they fade away. Z. rosea. also pink in color, a bright vivid pink that gleams like fire. is a smaller flowered sort with flowers about two inches across when expanded. The scapes are small, four to six inches high, stiffly upright bearing the flowers straight up. Its flowering season, in northern Florida is in early August with scattering blooms from then until the coming of cool weather. In winter the leaves disappear unless the temperatures are above freezing. A thick planting makes a striking show, and any planting soon becomes thick if undisturbed, since the small bulbs divide up and multiply rapidly. As the flowers fade they take on a purplish cast. Z. rosea appears not to be in the American bulb trade. At any rate attempts



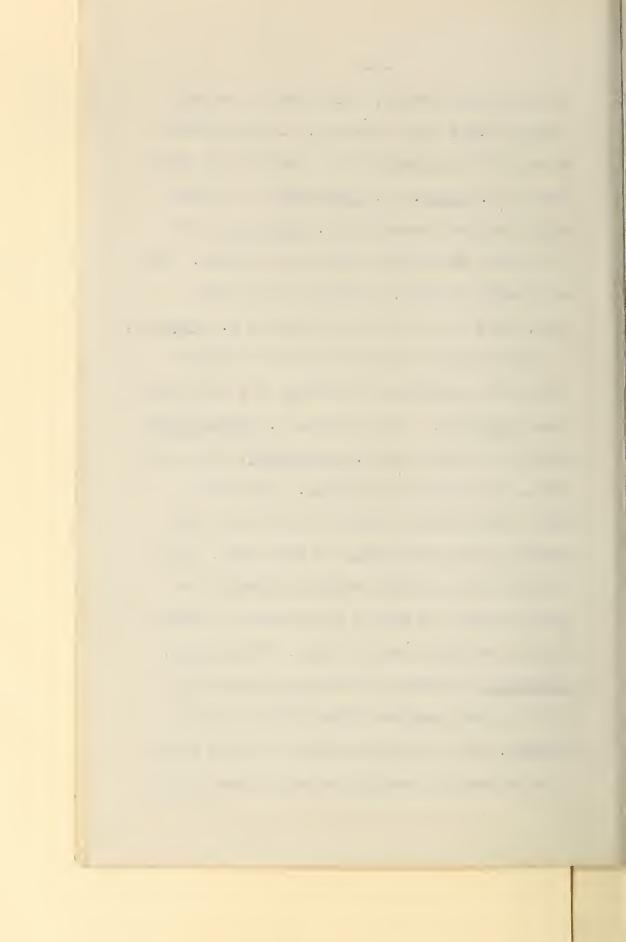
at securing it from various sources, far away Japan included, have always resulted in getting Z. carinata. Seemingly dealers are not aware that what they are handling is not correctly labeled.

Of the white flowered introduced varieties, Z. candida is the one most commonly seen and listed, it is very hardy and can probably be grown successfully wherever Z. atamasco succeeds. Its petals are pure white, bright green close to the base, thin, ribbed and covered with tiny glistening irridescent beads that give it an unusually bright appearance for a white flower. Because of the abundance of its glistening white flowers in the marshes along the LaPlata it is said to have suggested the name of that river. Usually the flowers are not widely expanded and in consequence have a crocus-like appearance. The flower stems are upright and commonly four to six inches in length. The foliage is unusual for the



group, being slender, dark green, rounded, upright stiff and rush-like. Its flowering season is in autumn about a month later than that of Z. rosea. Z. tubispatha in growth habit somewhat resembles Z. carinata, but its leaves are shorter and more slender. Its pure white flowers, greenish toward the base, open in spring with those of Z. carinata.

The "prairie lilies" although closely related to Zephyranthes belong to a different genus <u>Cooperia</u>. Two species, <u>C</u>. <u>pedunculata</u>, native of Texas, and <u>C</u>. <u>drummondii</u>, native in Texas, New Mexico and Mexico. Both have white star-shaped flowers tinted pink and becoming distinctly pink as they fade. The delightfully primrose scented flowers are borne upright on scapes six inches to twelve inches long and open at night. Those of <u>C</u>. <u>drummondii</u> are very interesting because of the long very slender tubes (four or five inches). In southern gardens on light soils they naturalize readily and are a much worth

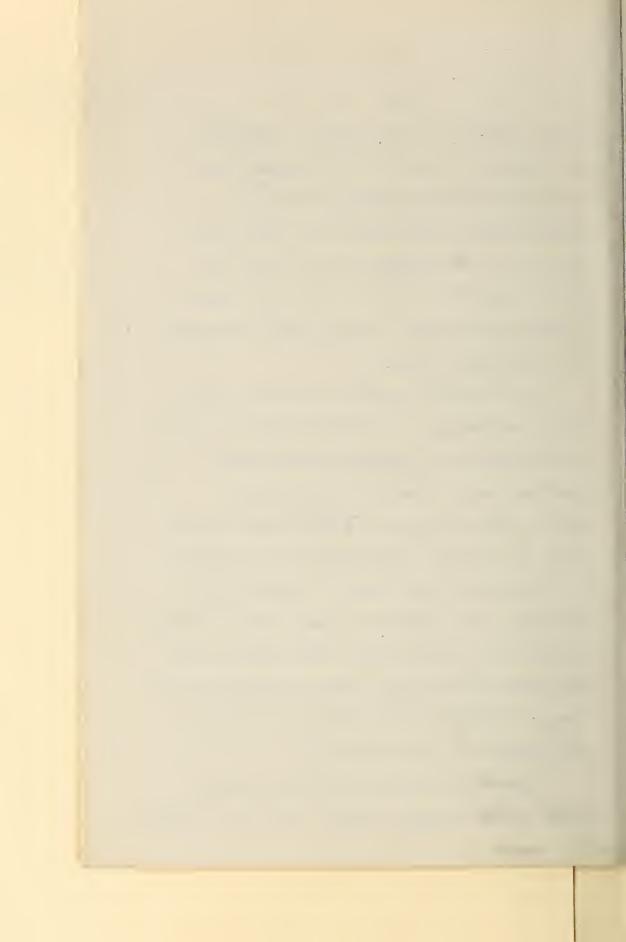


while addition to bulb lists. The bulbs are black, an inch or so in diameter and they bury themselves deep in the soil.

Bulbs produced from seeds that have germinated at the surface of the ground are later found to be six or even eight inches beneath the surface, having been pulled down by contractile roots.

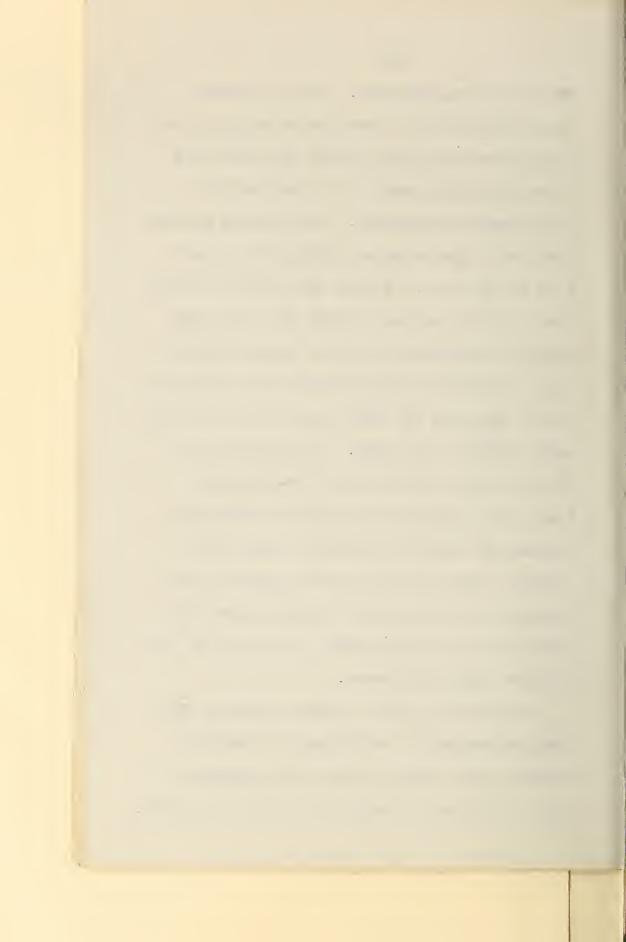
Bulbs of both groups are readily grown from seeds which are produced freely, except in the case of Z. carinata which seldom produces seed. Seeds are best sown as soon as ripe in pans or shallow boxes filled with the mixture recommended for pot culture or with sifted woods mold. Provide good drainage, sow shallow in rows, and cover with a light covering of soil, well packed down. The seedling bulbs may remain undisturbed for twelve months when they should be transplanted giving them more room.

Zephyranthes and Cooperies are easily grown in the garden. Crowding does not appear to



affect them injuriously. In old gardens where they have not been dug or molested for many years they bloom freely and give just as satisfactory results as when they are transplanted frequently. In southern gardens they may be taken up and replanted at any Indeed they may be lifted time of the year. when in full leaf and growth and more than that, if transplanted during their blooming period without being allowed to dry out they suffer scarcely any set back and are in bloom again within a few days. In cold climates they are best planted out in spring when frosts are gone for the winter, lifted in autumn and stored as gladioli corms are stored. Where frost does not penetrate too deeply, they may be left in the ground and protected by mulching with a covering of four or five inches of leaves.

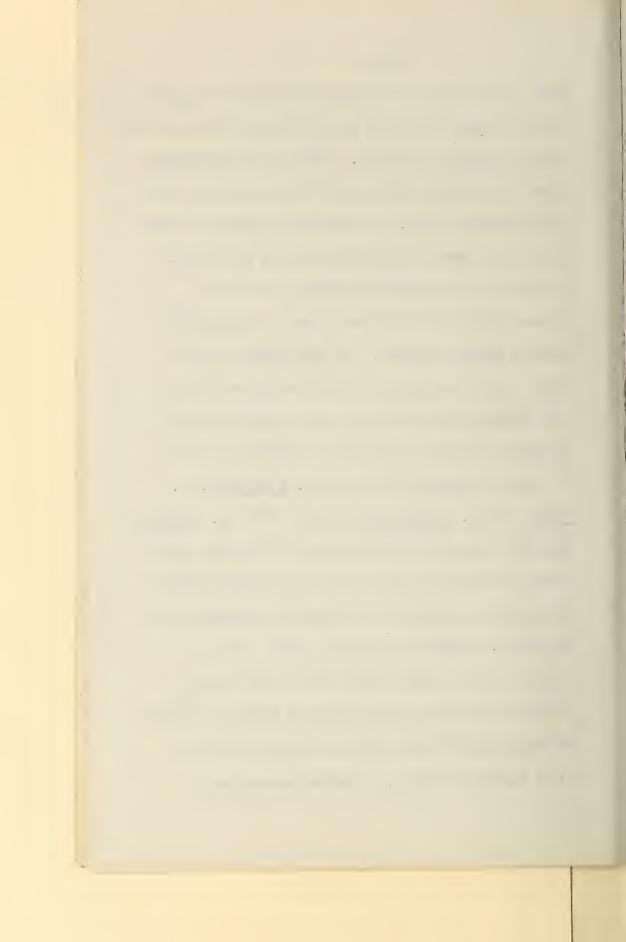
Zephyranthes fill a useful place in the rock garden and in the edges of shrubbery borders where they are not over shadowed by shrub branches, as well as in the bulb garden.



They should not be planted singly nor spaced too far apart for the best effects are secured when planted in masses. They are frequently used for edging walks and flower beds in the old fashioned way. In southern gardens they are unsurpassed for naturalizing in grass. It must be remembered however that the leaves should not be cut when in vegetative growth during summer. We so often forget that the price of good flowers depends upon the development and the proper functioning of good foliage during the previous season.

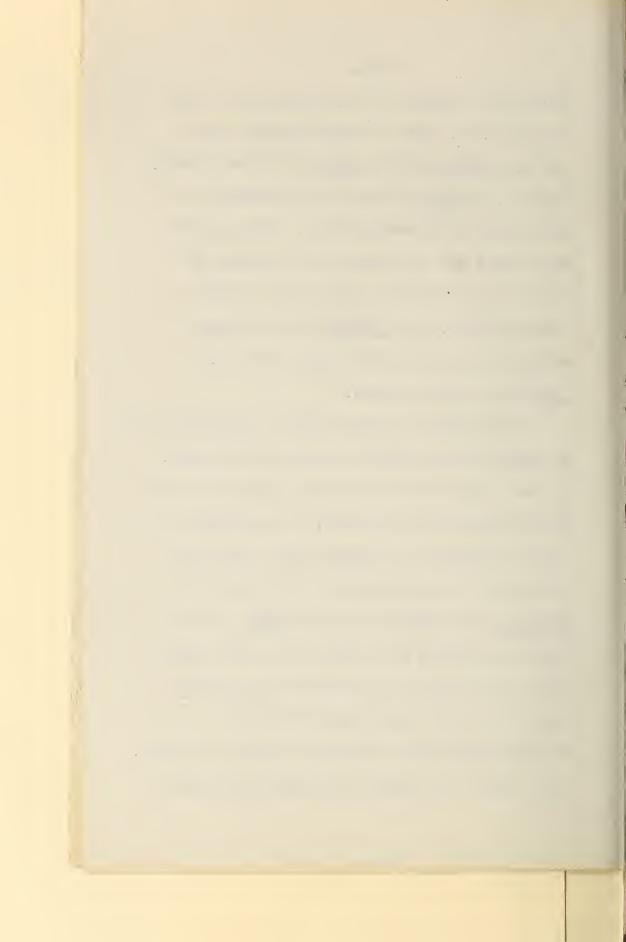
Light sandy soils suit Z. carinata, Z.

rosea and Z. tubispatha well, while Z. candida
and our native species prefer a heavier soil,
though they too may be grown on light soils,
if careful attention is given to feeding and
watering. Before planting, bone meal at
the rate of a half pound to a square yard
together with a liberal amount of peat should
be mixed thoroughly with the top four or
five inches of soil. Stable manure so

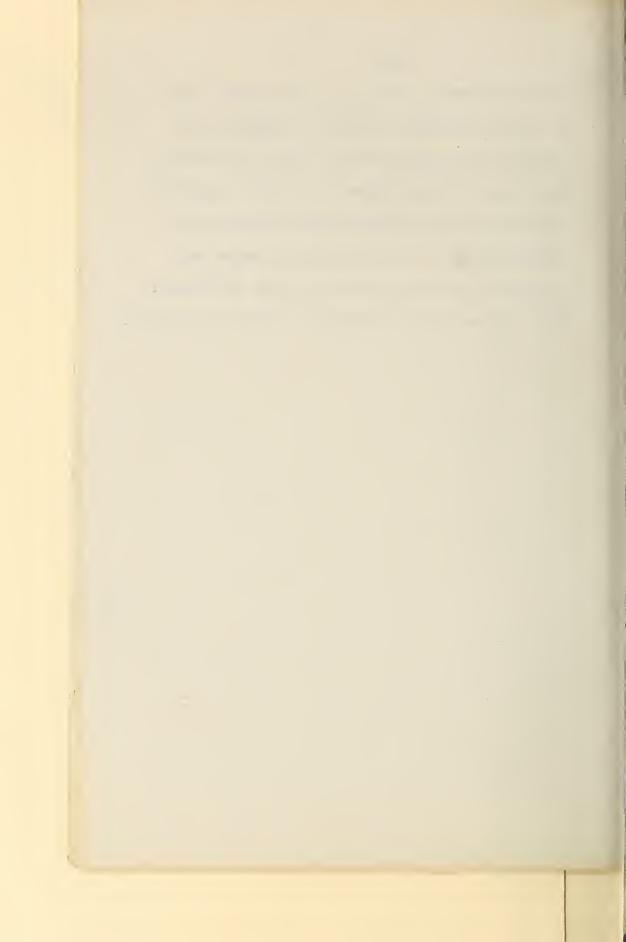


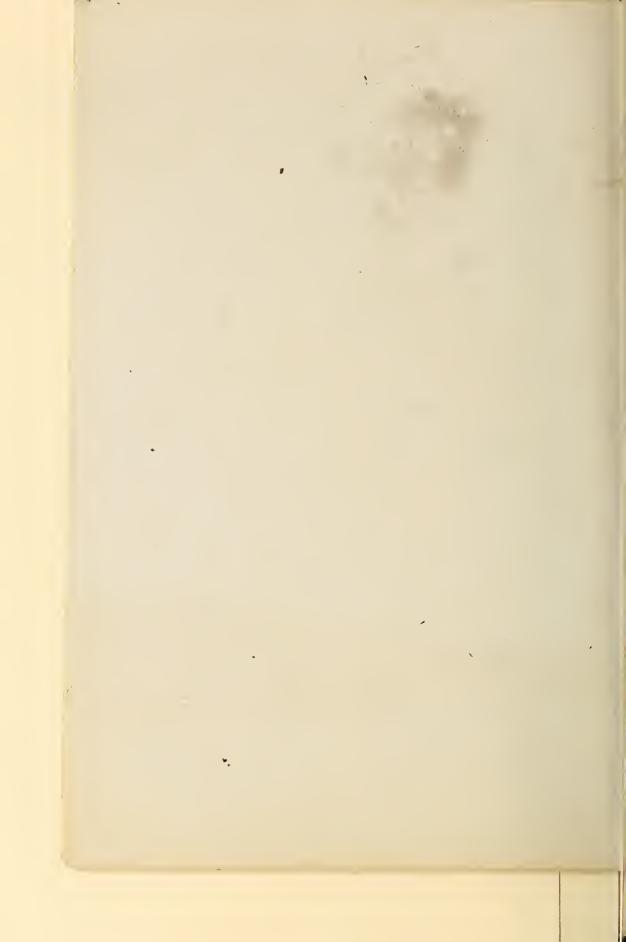
also be used. Two to three inches apart for Z. candida and Z. rosea is space enough, while Z. carinata should be given four to six inches of space each way. If planted where they are to remain for a number of years, it is best to space them somewhat farther apart. Z. candida and Z. rosea multiply rapidly by division, while Z. carinata is much slower.

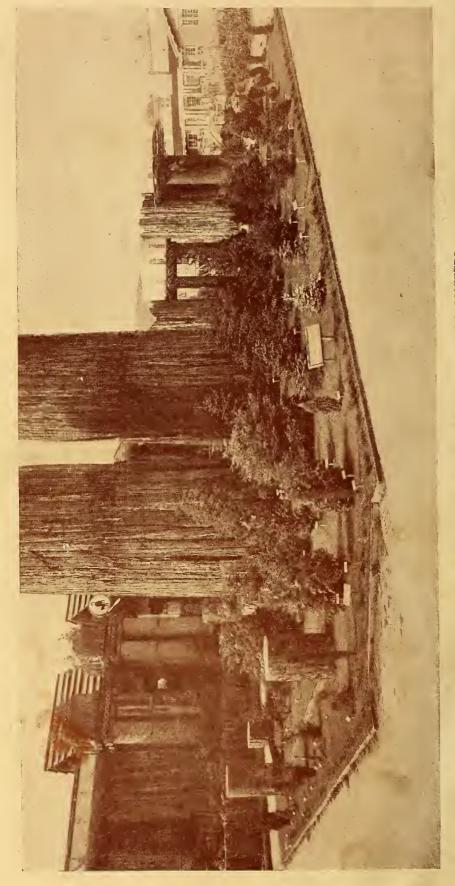
Zephyranthes, particularly Z. carinata and Z. rosea flower readily when grown in pots. In fact, they must be classed among the most satisfactory of pot plants. A suitable soil is composed of garden soil, peat and sharp sand in equal parts. Six bulbs of carinata, or twelve bulbs of rosea, set an inch to and inch and a half deep, are right for a six inch pot. In winter they may be kept in the pots and dried off to be started again with the warm weather of spring. They need not be repotted oftener than once



in two or three years. If additional food is deemed necessary it can be supplied by removing the soil from the tops of the pots to a depth of two inches or so and replacing with new earth enriched with bone meal or rotten manure. Pots containing bulbs may be set out of doors in the garden to flower. They can be taken in with the coming of winter.







OUR EXHIBIT OF 100 SPECIES AND VARIETIES OF CONIFERS
PANAMA-PACIFIC INTERNATIONAL EXPOSITION
AWARDED MEDAL OF HONOR